Supreme Court, U.S.
FILED

021854 JUN 17 2003

OFFICE OF THE CLERK

(1)

**IN THE SUPREME COURT OF THE UNITED STATES**

No.

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IN THE
**Supreme Court of the United States**

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MARIE G. KANESHIRO,
Surviving spouse of CALVIN T. KANESHIRO

*Petitioner (s)*

v.

HOLMES & NARVER, INC. AND WAUSAU INSURANCE CO.,

EMPLOYER/INSURANCE CARRIER-RESPONDENTS,
AND
DIRECTOR, OFFICE OF WORKERS COMPENSATION PROGAMS, UNITED STATES DEPARTMENT OF LABOR

PARTY-IN-INTEREST.

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On Petition for Writ of Certiorari
To The United States Courts of Appeals for the Ninth Circuit

# PETITION FOR WRIT OF CERTIORARI

MARIE G. KANESHIRO
P.O. BOX 303
LAUPAHOEHOE, HI 96764
(808) 967-9710

229 pp

## QUESTIONS PRESENTED

1) Was Sec. 20(a) presumption wrongly denied because of ALJ Di Nardi's judicial discretion, who arbitrarily and capriciously failed to follow the Governing Case Law in 1997. Instead of working entirely from the transcript, he accepted the erroneously filed briefs by the Employer. Thus, misapplying the process of Justice, which caused the other Courts to do so also, working in an opposite or contrary direction.

2) Was Judge Di Nardi blinded by brilliance when he chose the pre-imminent Qualifications and International Statue of the Employer's superior Experts who were non-examining and were hired as consultative physicians, instead of exploring the studies of the ICRP and Three Mile Island incident. He also failed to address Claimant's treating physician, Board Certified in internal

Medicine hematology, and medical oncology, who treated thousands of cancer patients. Freeman United Coal Mining Co. v. Summers, 272 F. 3d 473 (7th Cir. 2001), Consolidation Coal Co. v. Director, OWCP, 2001, WL 1408392, 23 Fed. Appx.114, (4th Cir.) (Unpublished) Gray v. Peabody Coal Co. 2002, WL 655448, 35Fed. Apex. 138 (6th Cir). Cited, Tussey v. Island Creek Coal Co. 9982 F. 2d 1036 (6th Cir. 1993)

## LIST OF PARTIES

[X] All parties appear in the caption of the cover page

[ ] All parties do not appear in the caption of the case on the cover page. A list of all parties to the proceeding in the court whose judgement is the subject of this petition is as follows

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6) Tussey v. Island Creek Coal Co. 9982 F. 2d 1036, (6th Cir.) 1993

(ii)

STATUES AND RULES
33 U.S.C. 920

OTHER

**IN THE SUPREME COURT**
**OF THE UNITED STATES**

**PETITION FOR WRIT OF CERTIORARI**

Petitioner respectfully prays that a writ of certiorari issue to the judgment below.

OPINIONS BELOW

[ ] For cases from federal courts:

The opinion of the United States court of appeals appears at Appendix A, B, E, F to the petition and is

[ ] reported at _____; or,
[ ] has been designated for publication but is not yet reported; or,
[X] is unpublished.

BRB - Appendix C, G, I
ALJ - Appendix D, H, J

## JURISDICTION

[X] For cases from federal courts:

The date on which the United States Court of Appeals decided my case was Feb. 28, 2003.

[ ] No petition for rehearing was timely filed in my case.

[X] A timely petition for rehearing was denied by the United States Court of Appeals on the following date: March 28, 2003, of the order denying rehearing appears at Appendix A.

[ ] An extension of time to file the petition for a writ of certiorari was granted to and including _____; (date) on _____ (date) in Application No.

The jurisdiction of this Court is invoked under 28 U.S.C.§1254(1).

## CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

The 4th Amendment, Due Process

Claim comes within provisions of the LHWCA, Section 20 provides that, " in any proceeding for the enforcement of a claim for compensation under this Act it shall be presumed, in the absence of substantial evidence to the contrary- (a) that the claim comes within the provisions of this Act." 33 U.S.C. 920

## STATEMENT OF THE CASE

Section 20(a) presumption was never rebutted. In the initial decision and order, ALJG. Marvin Bober, found claimant established his prima facie case based upon his exposure to radiation and diagnosis of Chronic Granulocytic Leukemia, that claimant was thus entitled to the presumption of causation at 33 U.S.C. 920, and the employer had failed to establish rebuttal of that presumption.

On appeal, the Board affirmed ALJ Bober's invocation of Sec. 20(a) presumption, however, remanded the case for the AlJ to address all of the medical evidence of record to establish rebuttal of Sec. 20(a) presumption.

On remand, the case was transferred to AlJ DiNardi, who departed from the course of judicial proceedings, and chose to rely entirely on the erroneous briefs filed by the employer, verbatim, (as pointed out by petitioner in the appendix of AlJ DiNardi), Instead of working through al the volumes of transcript (343 exhibits and 5 volumes of testimony). He was directed by the Board to address **all of the medical evidence to establish rebuttal.**

He found the employer-established rebuttal on the medical opinion of 5 non-examining, consultative physicians, 2 of which opined that the radiation dose of 1-2 rem from the record did not cause the injury. The other 3 doctors stated that they did not know of any evidence to prove causation at low levels of radiation. If he had not departed from the course of judicial proceedings, he would have **found** like ALJ Bober, Claimant's radiation dose was more than 2-3 rem, plus internal exposure, when he was placed on a contaminated island and was picked up by the helicopter.

None of the employer's experts produced evidence establishing the precise type of leukemia. (Dr. Upton, claimant's expert), stated, it is not fair to compare all types of leukemia combined, as CGL is only a subset. Port Cooper T. Smith Stevedoring Co., Inc. v. Hunter, 227, F. 3d 285 (5th Cir. 2000).

Because the establishment of rebuttal was in question Judge DiNardi should have applied the medical evidence in the studies of the International Commission of Radiological Protection, which comprised of 17 Doctors, and also the study of The Three Mile Island, which was

cited by Physicist, Phil Manly, Claimant's expert witness. (tR> 11, 315: 12-21, TR 11, 313: 2023, TR. 11, 316 : 15-22, TR. 11, 325 : 9-14).

All these Doctors unanimously agree that there is a non-threshold relationship between radiation exposure to ionizing radiation. These doctors have all stated that radiation exposure is considered potentially harmful and any amount, however small, could cause cancer such as leukemia.

Because Judge DiNardi did not recognize Mr. Manly as a qualified expert, (Decision at 7), He did not accept Mr. Manley's retrospective calculation when claimant was placed on the contaminated island, Clara, also a finding of judge Bober. Employer did not do a retrospective calculation on that island, thus failed to meet it's burden of providing the substantial evidence to rebut the presumption. Employer failed to show that the level of exposure to radiation could not and did not cause claimants leukemia. Compton v. Pennsylvania Ave, Gulf Service 14 BRB 472 (1981).

## REASONS FOR GRANTING THE PETITION

To allow this arbitrary and capricious Court's conduct to go on would be a travesty of Justice.

Mr. Kaneshiro's humanitarian rights were violated, and his right to a fair trial was also violated.

It would also adversely affect other worker's similarly situated as Mr. Kaneshiro depriving them their full benefits and constitutional right.

## CONCLUSION

Judge Di Nardi departed from the judicial proceedings, and by doing so, he failed to recognize substantial evidence in the record. If he had not deviated, her would have come to the same conclusion as Judge Bober did, that no evidence exists to rebut the presumption. He was also blinded by the credentials of the Employers Experts.

The petition for a writ of certiorari should be granted.

Respectfully submitted,

Dated: 6/17/03

APPENDIX A

**UNITED STATES COURT OF APPEALS**
**FOR THE NINTH CIRCUIT**

MARIE, G. KANESHIRO,
Surviving spouse of Calvin Kaneshiro,

Petitioner - Petitioner,

v.

HOLMES & NARVER, INCORPORATED, et al.,

Respondents.

**C.A. No. 01-71727**

**OWCP No. 15-352725**
**District of Hawaii,**

**ORDER**

Before: SKOPIL, FERGUSON, and BOOCHEVER, Circuit Judges

The panel has voted unanimously to deny the petition for rehearing. Accordingly, the petition for rehearing is DENIED.

**FILED**
**MAR 28 2003**
Cathy A. Catterson, Clerk
U.S. Court of Appeals

APPENDIX B

**NOT FOR PUBLICATION**
**UNITED STATES COURT OF APPEALS**
**FOR THE NINTH CIRCUIT**

MARIE G. KANESHIRO,
Surviving spouse of
Calvin Kaneshiro

Petitioner,

v.

HOLMES & NARVER,
INCORPORATED;
WASAU INSURANCE CO.;
DIRECTOR,
OFFICE OF WORKERS COMPENSATION
PROGRAMS

Respondents.

**FILED**
**FEB 28 2003**
**Cathy Catterson, Clerk**
**No. 01-7127**
**OWCP No. 15-352725**

**MEMORANDUM***

On Petition for Review of an Order of the
Office of Worker's compensation Programs

Submitted January 15, 2003**

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* This disposition is not appropriate for publication and may not be cited to or by the courts of this circuit except as may be provided by Ninth Circuit Rule 36-3.

Before: **SKOPIL, FERGUSON,** and **BOOCHEVER,** Circuit Judges.

Calvin Kaneshiro unsuccessfully sought worker compensation benefits in 1989, claiming that his chronic granulocytic leukemia (CGL) was caused by exposure to radiation during his employment in 1954-56. After his death in 1997, his wife petitioned for modification based on alleged factual errors. The Benefits Review Board (BRB) affirmed the denial of benefits because the factual errors were harmless and because substantial evidence established that Kaneshiro's illness was not related to his employment. We have jurisdiction pursuant to 33 U.S.C. § 921 (c), and we deny the petition for review.

## DISCUSSION

The Longshore and Harbor Workers' Compensation Act (LHWCA), 33

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** This panel unanimously finds this case suitable for decision without oral argument. See Fed. R. App. P. 34 (a)(2).

U.S.C. §§ 901-50 (as extended by the Defense Base Act, 42 U.S.C. §§ 1651-54), provides the statutory mechanism by which covered employees are entitled to compensation for work-related injury. See Todd Shipyards Corp. v. Director, OWCP, 139 F. 3d 1309, 1311-12 (9th Cir. 1998). The LHWCA specifically creates a presumption in favor of benefits for an injured employee by "providing that a claimant's injury is presumed to be covered by the Act . . . ." See Ramey v. Stevedoring Servs. Of Am., 134 F.3d 954, 959 (9th Cir. 1998) (citing 33 U.S.C. § 920(a)).

The issue here is whether Kaneshiro's employer overcame this statutory presumption by submitting "evidence specific and comprehensive enough to sever the potential connection between the disability and the work environment." Id. (internal quotation omitted). An administrative law judge (ALJ) found that the evidence "overwhelmingly indicates there was very little chance or possibility that Mr. Kaneshiro's disease was caused by his exposure to radiation through his employment." The BRB concluded that

substantial evidence supports the ALJ's decision. Our task is to review the BRB's decision for "errors of law and adherence to the substantial evidence standard." See Sestich v. Long Beach Container Terminal, 289 F.3d 1157, 1159 (9th Cir. 2002) (internal quotation omitted).

As a preliminary matter, we reject the employer's contention that the motion for modification was not timely. The LHWCA permits a party to seek modification of a decision "at any time prior to one year after the rejection of a claim." See 33 U.S.C. § 922. The BRB in this case reasonable interpreted "rejection of a claim" to mean the BRB's final decision. See Stevedoring Servs. Of Am. V. Director, OWCP, 297 F.3d 797, 801 (9th Cir. 2002) (noting that court must respect the BRB's interpretation of the statute where such interpretation is reasonable). The employer also contends that the motion improperly sought to review legal rather than factual determinations. The record indicates, however, that the ALJ carefully limited his review to the alleged "mistakes of fact" and specifically noted that "a party should not be allowed to attempt to retry a case

through the modification procedures." Finally, the employer contends that the ALJ should not have permitted the modification procedure at all. We have noted, however, that "[t] he ALJ has broad discretion under section 922 to correct mistakes of fact, whether demonstrated by wholly new evidence, cumulative evidence, or merely further reflection on the evidence initially submitted." See E.P. Paup Co. v. Director, OWCP, 999 F.2d 1341, 1347 n.1 (9th Cir. 1993) (internal quotation omitted).

On the merits, Marie Kaneshiro generally challenges the finding that her husband's illness was not employment-related. Her specific objection, however, appears to be to the ALJ's finding regarding the amount of radiation that her husband received. Although Marie Kaneshiro offered expert testimony that her husband may have been exposed to as much as fifteen rem of radiation and that such a level of exposure could cause 4 CGL, the ALJ credited the employer's experts, one who explained that Kaneshiro's "latent period" was too long for his CGL to have been caused by the occupational exposure, and another who concluded that even at an

exposure of fifteen rem, "it is highly improbable, or less than one percent chance that Mr. Kaneshiro's CGL was the result of his exposure.

We agree with the BRB that the ALJ "rationally credited the medical opinions of record that conclude that decedent's CGL was not related to radiation exposure during the course of decedent's employment with employer." It is the function and responsibility of the ALJ to weigh the evidence and, if necessary, "to credit one witness's testimony over that of another." See Duhagon v. Metropolitan Steveedore Co., 169 F.3d 615, 618 (9th Cir. 1999) (per curiam). "[O]ur task is not to reweigh the evidence, but only to determine if substantial evidence supports the ALJ's findings." Lockheed Shipbuilding v. Director, OWCP, 951 F.2d 1143, 1146 (9th Cir. 1991).

**PETITION FOR REVIEW DENIED.**

# APPENDIX C

**U.S. Department of Labor**
Benefits Review Board
P.O. Box 37601
Washington, DC 20013-7601

**BRB No. 01-0216**

MARIE G. KANESHIRO
(Widow of CALVIN T. KANESHIRO)
**NOT-PUBLISHED**
Claimant-Petitioner

v. **DATE ISSUE: SEP 28 2001**
**DECISION & ORDER**
HOLMES & NARVER, INCORPORATED

and

WASAU INSURANCE COMPANIES

Employer/Carrier-
Respondents

Appeal of the Decision and Order of Donald W. Mosser, Administrative Law Judge, United States Department of Labor.

Marie G. Kaneshiro, Laupahoehoe, Hawaii, pro se.

Robert C. Kessner and James N. Duca (Kessner Duca Umebayashi Bain & Matsunaga), Honolulu, Hawaii, and B. James Finnegan, San Francisco, California, for employer/carrier.

Before: HALL, Chief Administrative Appeals Judge, DOLDER and McGRANERY, Administrative Appeals Judges.

PER CURIAM:

Claimant, without legal representation, appeals the Decision and Order (91-LHC-2518) of Administrative Law Judge Donald W. Mosser rendered on a claim filed pursuant to the provisions of the Longshore and Harbor Workers' Compensation Act, as amended, 33 U.S.C. §901 *et seq.*, as extended by the Defense Base Act, 42 U.X.C. §1651 *et seq.* (the Act). In reviewing an appeal where claimant is not represented by counsel, the Board will review the administrative law judge's findings of fact and conclusions of law in order to determine whether they are rational, supported by substantial evidence, and in accordance with law:

If they are, they must be affirmed. 33 U.S.C. §921 (b)(3); *O'Keeffe v. Smith Hinchman & Grylls Associates, Inc.*, 380 U.S. 359 (1965).

This is the third time that this case has been before the Board. To briefly recapitulate claimant's husband, the decedent, was employed as a waiter/cook from January 20, 1954 to January 19, 1955 from February 16, 1955, and form December 16, 1955 to June 11, 1956, on the Enewetok and Bikini Atolls, during which time those atolls were utilized by the Atomic Energy Commission for atomic weapons testing programs. In January 1989, the decedent was diagnosed with chronic granulocytic leukemia (CGL). The decedent filed a claim seeking a total disability benefits under the Act, alleging that his exposure to radiation during the course of his employment with employer resulted in his CGL.

In the initial Decision and Order, Administrative Law Judge Bober found, *Inter alia.* That decedent established his prima facie case based upon his exposure to radiation and the diagnosis of CGL, that decedent was thus entitled to the presumption of causation at 33 U.S.C. §920(a), and that employer failed to establish rebuttal of that presumption.

Accordingly, Judge Bober awarded decedent temporary total disability compensation commencing January 17, 1989, and continuing, and medical benefits. On appeal, the Board affirmed the administrative law judge's finding that employer failed to establish rebuttal thereof, and remanded that case for the administrative law judge to address the relevant medical evidence of record to determine if employer established rebuttal of the Section 20(a) presumption. *Kaneshiro v. Holmes & Narver Inc.*, BRB No. 93-1370 (March 14, 1996)(unpublished).

On remand, the case was transferred to Administrative Law Judge Di Nardi. In his decision on remand, Judge Di Nardi found that employer established rebuttal of the Section 20(a) presumption. Judge Di Nardi subsequently weighed all the evidence of record and found that decedent failed to establish that his condition arose out of his employment. Accordingly, the claim for benefits was denied. On appeal, decedent challenged Judge Di Nardi's finding that the employer rebutted the Section 29(a) presumption. The Board affirmed this finding, as well as the unchallenged finding, based on the record as a whole, that decedent's CGL is not

related to his employment. *Kaneshiro v. Holmes & Narver, Inc.*, BRB No. 97-0596 (November 17, 1997)(unpublished).[1]

In June 1997, decedent's CGL resulted in his death. On August 14, 1998, claimant filed a petition for modification alleging a mistake in fact. See 33 U.S.C. §922. In his Order Granting Motion for Modification, Judge Di Nardi found claimant's petition timely and that claimant is entitled to a new hearing as she proposed offering additional expert testimony on the cause of decedent's CGL. Subsequently, Judge Di Nardi notified that parties that he would be unable to preside at the heating; the case thus was assigned to Administrative Law Judge Mosser (the administrative law judge). The administrative law judge admitted the parties' new evidence into the record. He found that the weight of this new evidence does not establish a mistake in the ultimate determination that decedent's CGL was not

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[1]Claimant's appeal of the Board's November 1997 decision to the United States Court of Appeals for the Ninth Circuit was dismissed for lack of jurisdiction. See 33 U.S.C. §921(c).

caused by his work-related exposure to ionizing radiation.

The administrative law judge also addressed claimant's contentions that Judge Di Nardi erred in discrediting the testimony of Philip Manly, claimant's radiation expert witness. The administrative law judge found that any error Judge Di Nardi may have made would be harmless, because claimant's specific allegations of error are irrelevant to the underlying basis of Judge Di Nardi's conclusion that decedent's CGL is not work-related. The administrative law judge found Mr. Manly's testimony less credible than the expert opinion of Dr. Auxier, and that claimant failed to meet her burden of proof because the greater weight of the evidence establishes that decedent's CGL was not related to his employment.[2]

On appeal, claimant, without the assistance of counsel, challenges the denial of her petition for modification. Employer responds, urging affirmance.

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[2] For example, the administrative law judge agreed the Mr. Manly was qualified to make retrospective radiation calculations. Contrary to Judge Di Nardi's finding, but that his opinion is not entitled to dispositve weight. See Decision and Order at 14-16.

Section 22 of Act, 33 U.S.C. §922, provides the only means for changing otherwise final decisions. Modification pursuant of Section 22 is permitted if the petitioning party demonstrates a mistake in a deter nination of fact, *see Banks v. Chicago grain Trimmer Ass'n*, 390 U.S. 459 (1986), or a change in the claimant's physical or econimic conditon. *Metropolitan Stevedore Co. v Rambo*, 515 U.C. 291, 30 BRBS I (CRT)(1995). Where as, in the instant case, the claimant has been found entitled to the Section 20(a) presumption linking decedent's CGL to his employment, and that employer has rebutted that presumption, the administrative law judge is required to weigh all of the evidence contained in the record and resolve the causation issue based on the record as a whole with claimant bearing the burden of persuasion. See, e.g., *Universal Maritime Corp. v. Moore*, 126 F.3d 256, 31 BRBS 119(CRT) (4th Cir. 1997); *see generally Director, OWCP v. Greenwich Collieries*, 512 U.S. 267, 28 BRBS 43 (CRT)(1994). These standards for determining the cause of decedent's CGL on modification are the same as in the initial adjudicatory process. *See generally Duran v. Interport Maintenance Corp.*, 27 BRBS 8 (1993).

The administrative law judge found that the overwhelming weight of the evidence does not prove that decedent's CGL was caused by his exposure to ionizing radiation while working for employer. In this regard, the record before Judge Di Nardi included the medical opinions of Drs. Fry, Goldman, Fabrikant, Moloney, and Auxier that decedent's radiation exposure during the course of his employment with employer form January 1954 to June 1956 was not a cause of decedent's CGL, which was initially diagnosed in January 1989 *See Kaneshiro,* BRB No. 97-0596, slip op. at 3. The administrative law judge explicitly considered the totality of the medical evidence of record, including the medical report and testimony of Dr. Upton that claimant submitted on modification, and an additional medical report from Dr. Fry and the deposition testimony of Dr. Mettler, submitted by employer on modification. The administrative law judge specifically credited the dosage calculation by Dr. Auxier that decedent's work-related radiation exposure measured between 2 and 3 rem, as opposed to Mr. Manly's opinion that decedent's exposure measured no less than 6.3 rem, with a possible upper

range exposure estimate of 15.6 rem.[3] *Compare* May 12, 1992, Hearing Tr. At 288 *with* May 8, 1992, Hearing Tr. at 239-241, CXS 11, 13. The administrative law judge credited Dr. Auxier's superior qualifications and the information upon which he relied in forming his dosage calculation. [4] The

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[3] Ionizing radiation exposure is measured in "rem," which is an acronym for roentgen equivalent man. *See generally* EX 62.

[4] Dr. Auxier, who has a master's degree in health physics and a doctorate degree in nuclear engineering, is director of Health Physics at Oak Ridge National Laboratory. EX 22, Appendix 1.5. Mr. Manly is a certified health physicist. CX 2-M. Dr. Auxier derived his dosage calculation from the radiation badges decedent wore during the course of his employment for employer, which measured a total exposure of 1.13 rem, EX 103, his own experience with radiation safety procedures at decedent's place of employment, claimant's testimony, and the testimony of Robert Taft and Colonel Jacks, who supervised radiological safety at the employment sites between 1954 and 1956, November 16, 1999, Hearing Tr. at 76-77, 83-84, 94-96. Mr. Manly's dosage calculation additionally relied upon decedent's history alleging unbadged radiation exposure, and Defense Nuclear Agency reports. November 16, 1999, Hearing Tr. at 40-43, 53, 65-66.

administrative law judge also found that the more credible medical evidence supports a longer latency period between found that the more credible medical evidence supports a longer latency period between decedent exposure to radiation and the onset of his CGL than Mr. Manly used in his dosage calculation.[5] The administrative law judge concluded that any error alleged by claimant on modification in Judge Di Nardi's discrediting of Mr. Manly's dosage calculations and causation opinion is therefore harmless. Moreover, the administrative law judge specifically found the opinion of Dr. Upton to be equivocal and predicated upon inaccurate levels of radiation exposure of from 3 to 15 rem.[6]

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[5] Mr. Manly opined that decedent's CGL was initially manifest in April 1986, when decedent recorded an elevated whit blood cell count. CXS 11, 13; *see also* May 8, 1992, Hearing Tr. at 304-308. Drs. Fry, Fabrikant and Mettler opined that decedent's CGL was not manifest until January 1989, when claimant's treating physician, Dr. Rajdev, diagnosed CGL. May 13, 1992, Hearing Tr. at 111-112; EX 1-M at 5; EX 2-M at 12-13.

[6] Dr. Upton stated that the probability that decedent's CGL is related to his

In adjudicating a claim, it is well-established that an administrative law judge is entitled to determine the weight to be accorded to the evidence of record, and is not bound to accept the opinion or theory of any a particular medical examiner. *See Calbeck v. Strachan Shipping Co.*, 306 F.2d 693 (5th Cir. 1962), cert. denied, 373 U.S. 954 (1963); *Todd Shipyards Corp. v. Donovan*, 300 F.2d 741 (5the Cir. 1962); *John W. McGrath Corp. v. Hughes*, 289 F.2d 403 (2d Cir. 1961). In the instant case, the administrative rationally credited the medical opinions of record that conclude that decedent's CGL was not related to radiation exposure during the course of decedent's employment with employer, and the administrative law judge's decision is thus supported by substantial evidence. Moreover, the administrative law judge rationally afforded less weight to the opinions of Dr. Upton and Mr. Manly,

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employment is dependent on the extent of decedent's work exposure to radiation. At an exposure level of 15 rem, Dr. Upton opined it was more likely than not that decedent's CGL was work-related, while at an exposure level of 3 rem it was less likely than not that decedent's CGL was related to his employment. CX 7-M at 65.

which are the only opinions of record relating decedent's CGL to his work-related radiation exposure, based on their misconception as to length of the latency period before decedent's CGL was manifest and the extent of decedent's rem exposure. Contrary to claimant's contention, the administrative law judge was not required to give determinative weight to Mr. Manly's opinion merely because he found Mr. Manly qualified to render an expert opinion on the degree of radiation exposure. We therefore affirm the administrative law judge's determination on modification, based on the record as a whole that decedent's CGL was not related to his employment. See, e.g., Rochester v. George Washington University, 30 BRBS 233 (1997).

Accordingly, the administrative law judge's Decision and Order on modification affirmed.

**SO ORDERED.**

s/_____
BETTY JEAN HALL, Chief
Administrative Appeals Judge

s/_____
NANCY S. DOLDER,
Administrative Appeals Judge

s/_____
REGINA C. McGRANERY,
Administrative Appeals Judge

# APPENDIX D

**U.S. Department of Labor**
Office of Administrative Law Judges
525 Vine Street, Suite 900
Cincinnati, OH 45202
Telephone: (513) 884-3252
Facsimile: (513) 884-6108

Date Issued: October 5, 2000
Case No: 1991-LHC-2518
OWCP No: 15-32725

In the Matter of

MARIE G. KANESHIRO, Widow of
Calvin T. Kaneshiro,

Claimant,

v.

Holmes & Narver, Inc.,

Employer,

and

WAUSAU INSURANCE CO.,

Carrier,

and

DIRECTOR, OFFICE OF WORKERS' COMPENSATION PROGRAMS,

Party-in-Interest.

APPEARANCES:

Grant K. Kidani, Esq.
Alan L. Wong, Esq.
300 Merchant Street
Honolulu, HI 96813

For the claimant

James N. Duca, Esq.
Kessner, Duca,
Umebayashi, Bain
& Matsunaga
19th Floor, Central Pacific
Plaza
220 S. King Street
Honolulu, HI 96813
For the employer/carrier

BEFORE: DONALD W. MOSSER
Administrative Law Judge

***DECISION AND ORDER***

This proceeding involves a claim for worker's compensation benefits under

the Longshore and Harbor Workers' Compensation ACT, as amended, 33 U.S. C. § 901, as extended through the Defense Base Act, 42 U.S.C. § 1651 et seq. (the Act). The case involves the claimant's request for modification of the Decision and Order affirmed by the Benefits dated January 3, 1997, which was affirmed by the Benefits Review Board on November 17, 1997. The matter was referred to the Office of Administrative Law Judges on September 9, 1998.

Following proper notice to all parties, a formal hearing was held on November 16, 1999 at Honolulu, Hawaii. Exhibits of the parties were admitted in evidence pursuant to 20 C.F. R. § 702.338, and the parties were afforded the opportunity to present testimonial evidence and to file post-hearing briefs.

The finding of fact and conclusions of la set forth in this decision are based on my analysis of the entire record. Each exhibit and argument of the parties, although perhaps not specifically mentioned, has been carefully reviewed and thoughtfully considered. References to ALJX 1 through 5 CX 1 through 17 and EX 1 through 5 pertain to the exhibits admitted

in evidence at the original hearing held in 1992. The exhibits offered and admitted at the November 16, 1999 hearing by the administrative law judge, claimant and employer/carrier are cited as ALJX 6 through 50, CX 1-M through 21-M and EX 1-M through 3-M. The transcript of the November 16, 1999 hearing is cited as "Tr." and by page number.

## *ISSUES*

The initial issue to address is whether claimant's motion for modification is timely. If so, then I must next address the following questions raised by the claimant regarding mistakes of fact allegedly made by the administrative law judge in the decision and Order on Remand – Denying Benefits dated January 3, 1997:

1. Whether the administrative law judge erred in finding that the witness offered by the claimant, Philip Manly, was unqualified to offer an expert opinion because he has no back-ground in the retrospective calculation of radiation doses;

2. Whether the administrative law judge mistakenly found that Mr. Manly erred in his use of the so-called BEIR V

report in determining the latency period for purposes of the causation calculation and by the witness's "illogical reference from his own `probability of causation' calculation";

3. Whether it was a mistake of fact for the administrative law judge to find that Mr. Manly chose to use a 90 percent confidence level, rather than the 95 percent confidence level or higher, and thus substantially diminished the reliability of his conclusions;

4. Whether the administrative law judge erred in finding that Mr. Manly was unqualified to make medical or statistical judgments; and,

5. Whether the administrative law judge made a mistake of fact in concluding that Mr. Manly had failed to consider the significance of a study regarding the negative risk estimate for certain types of cancer based on low doses of radiation. (Tr. 19-22; CX 5-M; ALJX 27, 41).

Finally, employer/carrier also question whether the ultimate conclusions rendered by the prior administrative law judge in denying Mr. Kaneshiro's claim should be modified even if the judge made

the mistakes of fact alleged by the claimant. (Tr. 22-23).

## *FINDINGS OF FACT AND CONCLUSIONS OF LAW*

**Procedural History**

I reiterate that this case involves the claimant's request for modification of the previous administrative law judge's decision and Order on Remand – Denying Benefits. To understand the basis of this request and my resolution of the issues raised by the basis of this request and my resolution of the issues raised by the parties, however, it is best to review the rather lengthy procedural history of this proceeding.

Calvin T. Kaneshiro filed his claim for compensation on July 17, 1989. (CX 1). Mr. Kaneshiro alleged that he suffered from chronic granulocytic leukemia (CGL), which was caused by his employment with Holmes & Narver, Inc. Mr. Kaneshiro was exposed to ionizing radiation as a result of atomic weapons testing in the Pacific Proving Grounds where Mr. Kaneshiro worked for the employer from 1954 to 1956 as a waiter/cook in a support personnel

capacity. The employer was a civilian contractor providing support personnel to the Atomic Energy Commission and Joint program being conducted by the United States of America. It was Mr. Kaneshiro's contention that his exposure to ionizing radiation in his job caused him to develop cancer, which was diagnosed in January of 1989.

An administrative law judge of the United States Department of Labor conducted a formal hearing in May of 1992. That judge issued a Decision and Order Awarding Benefits on March 11, 1993. (ALJX 6). The judge pertinently found in that decision that the presumption of causality under section 20 (a) of the Act was invoked because the diagnosis of CGL proved Calvin[1] Kaneshiro suffered physical harm and because Mr. Kaneshiro was exposed to some degree of ionizing radiation in his work for the employer which could have caused his CGL. The judge also found that the evidence,

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[1] The decision also resolved other issues raised by the employer/carrier, but the judge's conclusions regarding those issues are not relevant to this decision because they were not contested on appeal to the Benefits Review Board.

specifically the opinions of Drs. Fabrikant and Goldman, was not sufficient to establish rebuttal of the Section 20 (a) presumption[1]. The judge therefore found that Mr. Kaneshiro was entitled to temporary total disability compensation under Section 8 (b) of the Act commencing on January 7, 1989.
(ALJX 6).

Employer/carrier appealed the administrative law judge's decision to the Benefits Review Board (Board). By decision and order dated March 18, 1996, the Board affirmed the judge's determination to invoke the Section 20 (a) presumption, but remanded the case for further consideration. The Board also vacated the judge's conclusion that the employer failed to establish rebuttal of the Section 20 (a) presumption based on the opinions of Drs. Goldman and Fabrikant. The Board held that there was additional evidence in the record, which the administrative law judge failed to address. It noted that this evidence, the opinions of Drs. Fry and Moloney, if credited by the administrative law judge, was sufficient to rebut the Section 20 (a) presumption. The Board therefore directed the administrative law judge to address all of the medical evidence on remand to

determine whether employer/carrier established rebuttal of the Section 20 (a) presumption and that if the judge concluded that the whole to render a decision supported by substantial evidence. In doing so, the Board also explained in a footnote that the administrative law judge was required on remand to set forth the qualifications of each of the witnesses when considering the medical evidence of record. (ALJX 7, p. 5).

On remand, the case was assigned to anther administrative law judge because the Office of administrative law judges no longer employed the original judge. After considering the evidentiary record developed at the 1992 hearing and the briefs submitted by the parties on remand the administrative law judge issued his Decision and Order on Remand – Denying Benefits on January 3, 1997. The judge initially considered the qualifications of the five experts who offered opinions on behalf of the employer/carrier at the hearing, as well as each of their opinions as to the causal relationship between Mr. Kaneshiro's CGL and his exposure to radiation.[2] He

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[2] Although not mentioned by the Benefits Review Board, the employer/carrier also offered

next compared this evidence against that offered through the claimant's three experts and concluded that the Section 20 (a) presumption was rebutted because employer/carrier had introduced scientific and comprehensive evidence sufficient to sever the chain between Mr. Kaneshiro's leukemia and his employment with Holmes & Narver. He then went on to thoroughly consider the opinions and qualifications of each of the witnesses, as well as the data on which the witnesses relied. The judge finally concluded, in denying Mr. Kaneshiro's claim, that the weight of the qualifications of the experts and the soundness of the scientific reasoning supported the position of the employer/carrier on the calculation of the amount of radiation to which Mr. Kaneshiro was exposed in his employment and on the causation of his disease. (ALJX 8).

The claimant to the Benefits Review Board appealed the decision on remand. The Board issued its Decision and Order on

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the testimony of Dr. John A. Auxier, who was the Director of Health Physics at the Oak Ridge National Laboratory. Dr. Auxier is a highly qualified nuclear engineer with an extensive research background involving radiation, health physics and dosimetry.

November 17, 1997 affirming the administrative law judge's decision. (ALJX 9). Claimant argued on appeal that the expert opinions credited by the judge were insufficient to establish rebuttal of the Section 20 (a) presumption because the opinions were not supported by definitive or affirmative studies underlying evidence. The Board rejected this argument noting that it had previously held "that a physician's medical opinion, regardless of the fact that a definitive study on the illness in question has not been done, may sever the connection between a claimants injury and his employment if the opinion is specific and comprehensive. *Neeley v. Newport News Shipbuilding & Dry-dock co.*, 19 BRBS 138 (1986)." The Board pointed out that the administrative law judge discussed "the pre-eminent qualifications and international stature of employer's witnesses and determined that the scientific data presented by each of the employers experts was persuasive and credible." The Board also affirmed the judge's finding that the Section 20(a) presumption was rebutted because the opinions of Drs. Fry, Goldman, Fabrikant, Moloney and Auxier severed the causal connection between the claimant's leukemia and his radiation exposure. Of particular importance, the Board also

affirmed, as unchallenged on appeal by the claimant, the administrative law judge's conclusion "that causation had not been established based upon the record as a whole." (ALJX 9).

Claimant next appealed the Board's decision to the United States Court of Appeals for the Ninth Circuit. (ALJX 10). However, the motion of the employer /carrier to dismiss, apparently on the timeliness of the appeal, was granted by the court on May 29, 1998. (ALJX 10). That court also denied a petition for reconsideration of the dismissal on July 1, 1998.

Mr. Kaneshiro's illness resulted in his demise in June of 1997. (EX M-3, P. 5) However, his widow filed a motion under FED. R. CIV. P. 60(b) on July 22, 1998 to set aside the administrative law judge's Decision and Order on Remand - Denying Benefits dated January 3, 1997. (ALJX 11). On August 14, 1998, she then filed a motion for modification of that judge's decision on remand. (ALJX 13). The matter was referred by the district director to the Office of Administrative Law Judges and after the filing of briefs by the parties, the administrative law judge, who rendered the

decision on remand, issued and order on January 21, 1999 in which he held the claimant's motion for modification was timely and that the motion was granted to the extent that another hearing would be convened for the purpose of allowing the parties to submit evidence relating to whether there were mistakes of fact made in issuing his decision and order. (ALJX 14-31). The administrative law judge then issued and order on February 1, 1999 indicating that he would be unable to preside over the reconvened hearing in this matter and that the case would be reassigned to another administrative law judge. (ALJX 32). The employer/carrier then appealed the administrative law judge's order dated January 21, 1999 to the Benefits Review Board, but the Board, on August 31, 1999, dismissed the appeal on the issues involved in this case. (ALJX 33-43). The matter subsequently was assigned to me and I conducted the second formal hearing. (ALJX 44).

**Modification Issues**

The initial question to resolve is whether the request for modification involved in this case is timely. The prior administrative law judge found in the

January 21, 1999 order that claimant's request is timely since it was filed within one year of the circuit court's dismissal of her appeal of the November 17, 1997 decision of the Benefits Review Board. (ALJX 31, p. 4). As I indicated at the hearing, I agree with that judge's conclusion.

Section 22 of the Act provides for the filing of a modification request "at any time prior to one year after the date of the last payment of compensation, or at any time prior to one year after the rejection of a claim" 33 U.S.C. § 922. In the case of a denial of a claim, the one-year time period provided in Section 22 commences on the date the decision becomes final. *Dean v. Marine Terminals Corp.*, 7 BRBS 234, 238-39 (1977); *Cobb v. Schirmer Stevedoring Co.*, 2 BRBS 132 (1975). Since the Benefits Review Board affirmed the administrative law judge's Decision and Order on Remand – Denying Benefits on November 17, 1997, and that decision was not timely appealed within the 60 days provided in Section 21 (c) of the Act, claimant's motion for modification dated August 14, 1998 obviously was filed within one year of the date the Board's decision became final. Thus, the motion for modification involved

in this proceeding was timely filed under Section 22.

Section 22 provides for modification of an award or denial based on either "a change in conditions or because of a mistake in a determination of fact." 33 U.S.C. § 922. Since the claimant involved in the initial proceedings died, the modification request filed by Mrs. Kaneshiro was correctly based on the "mistake of fact" provisions of that section of the Act. However, it is important to remember that the modification procedure is available to correct mistakes of fact only where such procedure serves the interests of justice. *O'Keefe v. Aerojet-General Shipyards, Inc.*, 404 U.S. 254, 256 (1971); reh'g denied 404 U.S. 1053 (1972), Hudson *v. Southwestern Barge Fleet Service, Inc.,* 16 BRBS 367, 369 (1984). Modification procedures are not appropriate to contest errors of law. *McCord v. Cephas,* 532 F.2d 1377, 1380 (D.C. Cir. 1976); *Swain v. Todd Shipyards Corp.*, 17 BRBS 124 (1985). Also, a party should not be allowed to attempt to retry a case through the modification procedures. *Thompson v. Quinton Engineers, Inc.*, 16 BRBS 62 (1977); *Dykes v. Jacksonville Shipyards, Inc.,* 13 BRBS 75,76 (1981). Unfortunately, I believe the claimant in this

case is attempting through this modification proceeding to circumvent the very situations the Board and the courts had hoped to avoid through their precedents.

Before addressing the specific mistakes of fact, which the claimant alleges the administrative law judge mad in rendering the decision on remand, I believe it would be beneficial to first consider the ultimate question presented by the employer/carrier. It is the position of these parties that even if the administrative law judge made the mistakes of fact as alleged by the claimant, the ultimate conclusions reached by the judge and affirmed by the Benefits Review Board in denying the claim would not be changed because the weight of the evidence does not prove that Mr. Kaneshiro's CGL was caused by his employment-related exposure to ionizing radiation.

I reiterate that the original administrative law judge found that the evidence presented before him established invocation of the Section 20 (a) presumption that Mr. Kaneshiro's CGL was caused this finding on appeal since there was evidence that the claimant suffered harm and that conditions existed in his job which could

have caused that harm. The employer/carrier indeed conceded the correctness of this finding at the hearing before me. (Tr. 22). The Board went on to point out, however, "unequivocal testimony of a physician that no relationship exists between an injury and a claimant's employment is sufficient to rebut the presumption." The Board then vacated the administrative law judge's finding that the employer had failed to establish rebuttal of the Section 20 (a) presumption based on the opinions of Drs. Goldman and Fabrikant. The judge had rejected the conclusions of these physicians because he found that the underlying studies supporting their conclusions were unpersuasive and insufficient to support the opinions of the physicians. The Board pointed out in this regard that "a medical opinion may not be rejected solely because it is unsupported by a definitive scientific study, rather, a medical opinion may be sufficient to rebut the presumption if it rules cut a causal relationship between claimant's harm and a working condition." (ALJX 7, p. 4). The Board went on to note that there was other medical testimony in the record of Drs. Fry and Moloney that the judge failed to consider. The Board instructed that such testimony, if credited was sufficient to rebut

the Section 20 (a) presumption. It therefore remanded the case for reconsideration on the causation issue specifically directing the administrative law judge to "address all of the medical evidence of record, including the opinions of Drs. Goldman, Fabrikant, Fry and Moloney, when determining whether the employer established rebuttal of the Section 20 (a) presumption." The Board also explained that if the administrative law judge concluded the Section 20 (a) presumption was rebutted, he was to weigh all of the evidence in the record and render a decision supported by substantial evidence. Thus, it is clear that this case was remanded by the Board for the purpose of requiring the administrative law judge to reconsider the pertinent evidence involving the medical question of the causation of the claimant's CGL.

The administrative law judge in rendering the decision on remand initially clearly followed the remand instructions of the Board. The judge considered both the oral and written testimony of the five qualified exper5t witnesses offered by the employer/carrier on the causation issue and highlighted the pertinent testimony of each of the experts and noted their outstanding qualifications. The judge then

provided considerable discussion as to why he accepted the opinions of the experts of the employer/carrier over those offered by the claimant's witnesses. The judge went on to conclude that the section 20 (a) presumption was rebutted because the employer/carrier had offered "specific and comprehensive evidence severing" the connection between Mr. Kaneshiro's CGL and his work with the employer. He then considered the record in depth in concluding the claimant had not met his burden of proving his CGL was caused by his work-related radiation exposure.

On appeal, the Board affirmed the administrative law judge's finding that the Section 20 (a) presumption was rebutted because the opinions of Drs. Fry, Goldman, Fabrikant, Moloney and Auxier severed the causal link between Mr. Kaneshiro's radiation exposure and his CGL, noting that the administrative law judge had relied on the "pre-eminent qualifications and international stature of employer's witnesses." Significantly, the Board also affirmed, as unchallenged on appeal, the judge's conclusion that the record as a whole failed to prove the necessary causation based on the qualifications of the employer's witnesses and the soundness of

their scientific reasoning. Quite simply, the Board agreed that the medical evidence available to the administrative law judge was not sufficient to prove that Mr. Kaneshiro's leukemia was caused by his work-related radiation exposure.

There has been some disagreement between the parties during this modification proceeding as to the exact issues being raised by the claimant. However, the parties agreed at the hearing that the claimant was contesting essentially the five issues raised above relating to alleged mistakes of fact made by the administrative law judge in rendering his decision on remand. None of these issues involves the medical question of whether Mr. Kaneshiro's leukemia was caused by his work-related radiation exposure. Quite the opposite, the mistakes of fact alleged by the claimant relate either to the expertise of claimant's witness, Philip Manly, or to some of the information utilized by him in making his retrospective calculation of the dosage of radiation to which Mr. Kaneshiro may have been exposed in his work with the employer. Since none of these alleged mistakes of fact pertains to the medical question of whether Mr. Kaneshiro's CGL was caused by radiation exposure in his job,

such mistakes of fact, if accepted by me, would not be sufficient to change the ultimate conclusions reached by the prior administrative law judge in denying Mr. Kaneshiro's claim in the decision on remand.

I should further not before addressing the alleged mistakes of fact that the parties did submit some additional evidence through this modification proceeding relating to the possible connection between Mr. Kaneshiro's leukemia and his exposure to radiation in his job. Specifically, the claimant offered the opinion of Dr. Arthur C. Upton, while the employer/carrier submitted a supplemental opinion of Dr. Shirley A. Fry, as well as the deposed testimony of Dr. Fred A. Mettler, Jr. Following are summaries of that portion of this evidence, which I determined to be particularly pertinent to this decision[3].

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[3] Additional evidence also was submitted, which has been considered. I note in this regard that no weight was given to the publication of Dr. John W. Gofman. (CX 6-M). This physician would not agree to the taking of his deposition by the employer/carrier to cross-examine his opinions. Moreover, claimants own witness, Dr. Upton, essentially acknowledged that Dr.

Dr. Arthur C. Upton, who is a highly qualified physician holding impressive qualifications in pathology, radiology and environmental medicine, rendered an opinion for the claimant. (CX 1-M). He based this opinion on a history related to him that Mr. Kaneshiro was exposed to ionizing radiation between 1954 and 1956, estimated to be between five and fifteen rem[4], and that Mr. Kaneshiro was diagnosed in January of 1989 with chronic granulocytic leukemia, the first signs of which may have appeared years earlier based upon an elevated leukocyte count found in 1986. In his report of June 16, 1999, this physician set forth the various factors, which he considered in rendering an opinion as to whether Mr. Kaneshiro's leukemia may have, been caused by his occupational exposure to ionizing radiation. These factors are based on various studies and publications regarding the relationship

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Gofman tends "to overstate or overestimate radiation risks." (CX 7-M; EX 3-M, p. 44).

[4] Ionizing radiation exposure is measured in "rem", which is an acronym for roentgen equivalent man. One rem of ionizing radiation is equal to that produced by one roentgen of x-rays.

of exposure to ionizing radiation, particularly in atomic bomb survivors of Hiroshima and Nagasaki, versus the increased risks of the various forms of leukemia. Based on the physician's knowledge as to Mr. Kaneshiro's exposure to radiation and the factors cited from the various references, Dr. Upton concluded, "that the 3-15 rem of ionizing radiation to which Mr. Kaneshiro was exposed while employed in the Marshall Islands could indeed have caused his granulocytic leukemia." He added that there was "nothing in the published literature or in Mr. Kaneshiro's record to indicate otherwise." (CX 5-M)

Dr. Upton later elaborated on his opinion in a deposition taken by the employer/carrier. When asked if he had an opinion as to whether exposure to radiation caused Mr. Kaneshiro's leukemia, the physician answered, "I think one can't exclude the possibility of a causal relationship." However, he went on to state that the probability of the disease based on radiation exposure is primarily dependent upon the amount of radiation to which the person is exposed. When asked about the statement in his June 16, 1999 report that Mr. Kaneshiro's disease "may" have been

concluded that Mr. Kaneshiro's disease was more likely than not unrelated to his occupational exposure to ionizing radiation. She indicated that she based this conclusion primarily on the latency period in Mr. Kaneshiro's case of more than 30 years duration, that there is no unequivocal epidemiological evidence of increased risk of CGL at occupationally exposed dose levels below 5 rem, that Mr. Kaneshiro's occupational doses were low or well within radiation protection standards, that the occupational doses incurred over periods of weeks during which biological repair was very likely to have occurred, and that Mr. Kaneshiro smoked one or more packages of cigarettes on a daily basis for an unspecified period ending in 1976. The physician also added in a cover letter regarding this report that she agreed with counsel for the employer/carrier "that the 'latent period' is too long for the CGL to have been caused by the occupational exposure", noting that Mr. Kaneshiro's smoking history was incomplete but that it could have been a significant contributing factor if it extended over a reasonable length of time. (EX 1-M).

Employer/carrier also offered the deposed testimony of Dr. Fred a Mettler, Jr. Dr. Mettler, who holds a masters degree in

caused by his exposure to radiation, the physician reiterated that he did not think that the possibility could be excluded but stressed that it really depends upon the dose of radiation that was received. He added that if the occupational dose was as high as 15 rem, it wouldn't have taken Mr. Kaneshiro much more than that amount to be at the stage where it was more likely than not that his CGL was due to such exposure. At an estimated dose of 3 rem, however, the physician testified that he would conclude it was less likely than not that Mr. Kaneshiro's leukemia was caused by his employment. (EX 3-M)

By report dated October 25, 1999, Dr. Fry supplemented her May 4, 1992 report with respect to this case. As noted by the prior administrative law judge and the Benefits Review Board, Dr. Fry holds a masters degree in public health and is a physician and a member of the teaching faculty of the Oak Ridge Associated Universities. The physician highlighted the factual history of this case, provided some explanatory comments regarding chronic granulocytic leukemia and provided pertinent information obtained through studies of nuclear industry workers. Based upon this information, the physician

public health, is a physician and current Professor and Chairman of the Department of Radiology at the University of New Mexico School of Medicine. The physician was first asked to assume that Mr. Kaneshiro was born in 927, was exposed for two years from 1954 to 1956 to some radiation, was diagnosed in 1989 with leukemia and died in June of 1997. The physician was then asked his opinion as to whether Mr. Kaneshiro's radiation exposure of 2 to 3 rem could cause chronic granulocytic leukemia in 1989. The physician testified, "It is very unlikely that that radiation exposure resulted in the CGL." Based upon this level of radiation exposure, Dr. Mettler opined that there was a one percent chance that it would cause CGL 32 years later. He pertinently testified later that he did not believe an elevated white blood cell count of Mr. Kaneshiro in 1986 would necessarily suggest leukemia at that point. Regarding Dr. Upton's conclusion with respect to the risk of CGLLL being caused by exposure of radiation of 15 rem, Dr. Upton stated that even at that level he would consider it highly improbable, or less than a one percent chance, that Mr. Kaneshiro's CGL was the result of his exposure to radiation in 1954 to 1956. The physician also testified

extensively about various publications relating to the health effects of ionizing radiation, one of which he co-authored with Dr. Upton in 1994. (EX 2-M).

I find that the additional evidence offered through this modification proceeding does not support the claimant's attempt to change the prior ultimate conclusions rendered in the decision on remand. The administrative law judge concluded in that decision that the evidence initially offered by the employer/carrier was sufficient to rebut the Section 20 (a) presumption that Mr. Kaneshiro's CGL was caused by his work-related exposure to ionizing radiation. The judge also concluded that the weight of the evidence was not sufficient to meet the claimant's burden of proving that the work-related radiation exposure indeed caused Mr. Kaneshiro's leukemia. The judge's conclusion regarding the Section 20 (a) presumption was affirmed on appeal by the Benefits Review Board on the grounds there was substantial evidence to support it, while the judge's conclusion regarding the weight of the evidence on causation was affirmed by the Board because the finding was not challenged on appeal.

First, I consider the Board's conclusions regarding both the Section 20 (a) rebuttal and the weight of the causation evidence to be binding conclusions of law, which are properly subject to question only through the appellate process. *McCord v. Cephas*, 532 F.2d 1377, 1380 (D.C. Cir. 1976); *Swain v. Todd Shipyards Corp.*, 17 BRBS 124 (1985). Secondly, I agree that the voluminous evidence in this record unequivocally supports the conclusions reached on remand by the administrative law judge. After further reflecting on this evidence in light of the additional evidence submitted through this modification proceeding, it is evident to me that the ultimate conclusions reached by the administrative law judge in the decision on remand and by the Benefits Review Board on appeal are unmistakenly correct. The convincing evidence offered by the employer/carrier is sufficient to rebut the Section 20 (a) presumption as it severs any connection between Mr. Kaneshiro's leukemia and his work-related exposure to radiation. Thus, the burden of proving by a preponderance of evidence that the disease was caused by such exposure must be borne by the claimant. *Director, OWCP v. Greenwich Collieries*, 114 S. Ct. 2251 (1994), *aff'g sub. Nom., Greenwich Collieries v.*

*Director, OWCP*, 990F. 2d 730 (3d Cir. 1993). Not only does the medical evidence in this record fail to meet the claimant's burden of proof on this issue, it overwhelmingly indicates there was very little chance or possibility that Mr. Kaneshiro's disease was caused by his exposure to radiation through his employment. Dr Upton's opinion is equivocal at best on this question. He states Mr. Kaneshiro's CGL could have been caused by his exposure to 3-15 rem of radiation, emphasizing that the extent of such exposure obviously would increase that risk. This adds little to the claimant's case since the claimant's witness, Philip Manly, estimated Mr. Kaneshiro's radiation exposure at no more than 6.3 rem, while the more credible estimate of the expert offered by the employer/carrier, Dr. Auxier, placed the exposure between 2 and 3 rem. Moreover, the more credible medical evidence supports a longer latency period between Mr. Kaneshiro's exposure to radiation and the onset of his CGL than Mr. Manly used in his dosage calculations. Quite simply, the weight of the more credible, medical and scientific evidence does not support the claimant's position as to the cause of Mr. Kaneshiro's CGL. Thus, the ultimate conclusions reached in this case are unaffected by the mistake of facts

alleged by the claimant, even if it is assumed that such mistakes were indeed made by the administrative law judge in rendering his decision on remand.

I shall next address the specific mistakes of fact, which the claimant alleges the prior administrative law judge made in the decision on remand. The first and fourth of those issues relate to the qualifications of Philip Manly, who testified at the original hearing regarding his retrospective calculation of the radiation dose to which Mr. Kaneshiro was exposed in his job. Claimant initially argues that the administrative law judge made a mistake of fact in his decision on remand by making the statement that Mr. Manly "has no background in the retrospective calculations of radiation doses, whether from nuclear weapons or otherwise", then by stating it was doubtful whether Dr. Manly's "qualifications were sufficient even to make his testimony admissible under the rule that experts must be experts on the issue to which their testimony is directed, and not simply experts in vaguely analogous fields." (Tr. 45-46; CX 5-M; ALJX 8, p. 7). The administrative law judge also found that Mr. Manly "is unqualified to make medical or statistical judgments" which the

claimant alleges to be another mistake of fact made by the judge. (Tr. 51-52; CX 5-M, p. 3; ALJX 8, p. 7).

With respect to the initial alleged mistake of fact, I agree with the claimant that Mr. Manly is qualified to make retrospective radiation calculations as he did in this case. Claimant correctly notes that this witness is certified in health physics from the American Board of Health Physics and holds a masters degree in health physics and environmental engineering. He has indeed been held to be a qualified expert in radiation safety by the State of Hawaii based on his professional qualifications. Moreover, the record supports the conclusion that he does have some experience in retrospective dose assessments. (Tr. 46). Therefore, Mr. Manly is qualified to render an expert opinion for purposes of this case.

Regarding the fourth alleged mistake of fat made by the prior administrative law judge, Mr. Manly testified before me that he is not a medical doctor; this, the judge's statement that Mr. Manly was unqualified to make medical judgments is accurate. (Tr. 51). As to whether this witness is qualified to make

statistical judgments, Mr. Manly testified that he was very careful in his report to only rely upon "conclusions of peer reviews and articles that he had read." (Tr. 51). He therefore argues that he was making his own judgments regarding the statistical data reported. Again, this only serves to confirm that the judge also was correct in concluding that Mr. Manly is not qualified to make statistical judgments. (Tr. 51-52). I therefore find that this issue raised by the claimant is much ado about nothing since Mr. Manly has now admitted that he indeed is not qualified to render medical or statistical judgments, but just that he did not make such judgments for purposes of this case. This alleged mistake of fact is of no consequence to the outcome of this proceeding.

Returning again to the question of Mr. Manly's qualifications, I do not believe the administrative law judge made a mistake in this regard although he never specifically found that Mr. Manly should not be accorded the status of an expert. Perhaps the judge would have caused less consternation to Mr. Manly and the claimant, if he had just accepted the witness as an expert, then went on to afford the opinion of Dr. John A. Auxier more weight

simply because Dr Auxier is considerably more qualified in measuring radiation from nuclear weapons tests and in retrospective dosimetry calculations. Again, this alleged mistake of fact is of no serious consequence to the outcome of this case, but I note that I too consider the opinions of Dr. Auxier to be more credible for purposes of this case based both upon his qualifications and upon the information on which he relied in forming his opinion.

The next alleged mistakes of fact addressed by the claimant relate to the judge's statement that Mr. Manly erred in determining the latency period between Mr. Kaneshiro's exposure to radiation and the onset of his CGL and then erred in concluding that Mr. Manly made an "illogical inference from his own 'probability of causation' calculation that Mr. Kaneshiro's post-employment radiation exposure was more likely than not the cause of his chronic granulocytic leukemia." Mr. Manly points out through his testimony before me and in the report prepared in connection with this modification proceeding that he never determined the pertinent latency period but only "assumed the latency period for purposes of the calculation." He testified that the testimony

of the claimant's expert, Dr. Rajdev, established the latency period for purposes of Mr. Manly's computation based on the physician's opinion that it was more likely that Mr. Kaneshiro's illness was present in 1986.

I believe the claimant's allegations in this regard to be correct. Again, however, these errors on the part of the administrative law judge are of no consequence to the outcome of this matter. Perhaps, the administrative law judge should have stated that he found, as do I, that the latency period used by Mr. Manly in his calculation was in error because the weight of the evidence in this record does not support a latency period using 1986 as the onset date of Mr. Kaneshiro's disease. Regarding the second error, I agree that I can find no reference supporting the judge's finding that Mr. Manly mad e any inference from a "probability of causation" calculation. In this regard, it would appear that the administrative law judge should have more accurately stated that the weight of the medical record fails to support any inference that Mr. Kaneshiro's CGL was probably caused by his employment-related exposure to radiation as calculated by Mr. Manly. Again, however, I stress that the

administrative law judge's error in drafting the questioned explanatory phrases is of no consequence to the ultimate finding that the preponderance of the medical evidence fails to support the claimant's position that Mr. Kaneshiro's leukemia was induced by his work for the employer.

I also agree that the administrative law judge perhaps went too far in questioning Mr. Manly's use of the 90 percent confidence level in his calculation (Issue 3) and this expert's failure to address the significance of a specific comment in the NRRW study regarding the negative risk estimate for certain types of cancer based on low doses of radiation (Issue 5). (CX 5-M; ALJX 8, pp. 19, 25). Mr. Manly explained through his testimony before me and in the report that he prepared for the modification proceeding why these portions of the judge's analysis are incorrect. (Tr. 48-50; CX 5-M, pp. 3, 6). Based on this testimony and a review of the pertinent evidence, I agree with the claimant that the prior administrative law judge incorrectly interpreted Mr. Manly's use or characterization of the information relating to these issues. Again, however, these errors are of no importance to the ultimate medical conclusion of whether Mr.

Kaneshiro's CGL was caused by his work-related exposure to ionizing radiation. I again admit that it perhaps would have been more prudent for the administrative law judge to just accept the opinion of Dr. Auxier based on this expert's outstanding qualifications and the reasonableness of the factors supporting his conclusions rather than to meticulously attempt to discredit a significant portion of Mr. Manly's analysis or the factors that he utilized in making his dose calculation.

I reiterate that it was difficult to get the claimant to specifically articulate the specific portions of the prior administrative law judge's findings, which were the basis of the claimant's motion request. Although the claimant agreed at the hearing that the above-discussed alleged mistakes of fact were the focus of the modification proceeding, the claimant expanded her attack on the judge's decision through the post-hearing briefs filed on her behalf. For example, she argues the administrative law judge was bound on remand to the facts found by the original administrative law judge in his Decision and Order Awarding Benefits. She also goes on to attempt to discredit Dr. Auxier's dosage calculation and contends the administrative law judge

made a mistake of fact on remand in relying on Dr. Auxier's opinion. Claimant also argues in her post-hearing briefs how the prior administrative law judge erroneously concluded that the evidence rebutted the Section 20 (a) presumption and his finding that the weight of the evidence was not sufficient to prove that Mr. Kaneshiro's CGL was caused by his work-related exposure to ionizing radiation.

I agree that the administrative law judge initially provided a form paragraph I his decision on remand indicating that the findings of fact and conclusions of law made by the original administrative law judge were binding upon the parties and incorporated therein by reference, to the extent not disturbed by the Benefits Review Board. The administrative law judge then went on in the body of his decision to disregard the findings of fact and conclusions of law made by the original administrative law judge and rendered new findings of fact and conclusions of law. I find that the only error made by the administrative law judge was his indication that he was bound by the prior administrative law judge and rendered new findings of fact and conclusions of law. I find that the only error made by the

administrative law judge was his indication that he was bound by the prior administrative law judge's findings of fact and conclusions of law. The Benefits Review Board did not indicate in its decision pertaining to the original decision that it was affirming all of the findings of fact and conclusions of law found in the original administrative law judge's decision, except those that the Board vacated. Moreover, it was not error for the administrative law judge to render new findings of fact and conclusions of law in his remand decision which differed from those set forth in the original decision because it was necessary for him to do so in weighing all of the evidence of record with respect to the ultimate question of whether the evidence proved Mr. Kaneshiro's illness was caused by his work-related exposure to radiation.

I also reject claimant's arguments regarding the prior administrative law judge's conclusions concerning rebuttal of the Section 20 (a) presumption and the weight of the medical evidence regarding the causation of Mr. Kaneshiro's disease. The Benefits Review Board specifically remanded the case for the purpose of reconsidering the evidence with respect to

these matters and the administrative law judge did so no remand in a reasonable manner. Obviously, it was not error for him to also consider and accept the dosage calculation by Dr. Auxier over that of Mr. Manly in weighing the evidence because the estimates as to the level of Mr. Kaneshiro's exposure to radiation were the basis of the medical opinions regarding the causation of Mr. Kaneshiro's chronic granulocytic leukemia. After reconsidering all of the evidence in this record, including that submitted in this modification proceeding, I believe it would be and injustice to the employer/carrier, rather than the claimant, to conclude anything other than that the overwhelming weight of the employer's evidence supports the prior administrative law judge's conclusions that the Sections 20 (a) presumption was rebutted and that the preponderance of the evidence in the record unquestionably fails to meet the claimant's burden of proving that Calvin T. Kaneshiro's chronic granulocytic leukemia was caused by his work-related exposure to ionizing radiation. The Benefits Review Board obviously recognized this by holding that the opinions of Drs. Moloney, Goldman, Fry, Fabrikant and Auxier severed any connection between Mr. Kaneshiro's CGL and his work. (ALJX 9,

pp. 4-5; EX 2, p. 3 ; EX 19 ; EX 22, p. 15 ; Original Hearing Transcrit Vol. III, pp. 247-248 and Vol. IV, pp. 171-172). Drs. Fry and Mettler confirmed this conclusion through this modification proceeding. (EX 1-m, 2-M. Therefore, the claimant's request for modification must be denied to the extent that it prays for a change in the prior administrative law judge's ultimate conclusions and his final order denying Mr. Kaneshiro's claim for benefits.

*Order*

For those above-stated reasons, IT IS HEREBY ORDERED that the claimant's request for modification of the prior administrative law judge's Decision and Order on Remand - Denying Benefits dated January 3, 1997 is denied to the extent that it requires a change in the ultimate conclusions rendered in denying the claim involved in this case.

s/_____
Donald W. Mosser
Administrative Law Judge

APPENDIX E

**UNITED STATES COURT OF APPEALS**
**FOR THE NINTH CIRCUIT**

MARIE G. KANESHIRO

Petitioner,

**No. 98-70063**

vs.

**ORDER**

DIRECTOR, OFFICE OF WORKERS' COMPENSATION PROGRAMS, THE UNITED STATES DEPARTMENT OF LABOR, et al. ,

Respondents.

Before; SCHROEDER, TROTT, and FERNANDEZ, Circuit Judges

Petitioner's "petition for reconsideration of dismissal" is construed as a motion for reconsideration of the court's May 29, 1998 order dismissing this appeal for lack of jurisdiction. So construed, the motion is denied. See 33 U.S.C. § 921(c).

No motions for reconsideration, modification, or clarification of this order shall be filed or entertained.

FILED
JUL-1 1998
Cathy Catterson, Clerk
U.S. Court of Appeals

misc/ 6.98/ 98.70063 (ka)

APPENDIX F

**UNITED STATES COURT OF APPEALS**
**FOR NINTH CIRCUIT**

MARIE G. KANESHIRO,
Petitioner,

vs.

**No. 98-70063**
**BRB# 97-0596**
**ORDER**

DIRECTOR, OFFICE OF WORKERS COMPENSATION PROGRAMS, THE UNITED STATES DEPARTMENT OF LABOR, et al.
Respondents.

Before: SCHROEDER, TROTT, and FERNANDEZ, Circuit Judges

Respondents' motion to dismiss the petition for review for lack of jurisdiction is granted. See 33 U.S.C. § 921 (c).

Accordingly, all pending motions are denied as moot.

**FILED**
**MAY 29 1998**
**Cathy A. Catterson, Clerk**
**U.S. Court of Appeals**

APPENDIX G

U.S. Department of Labor
Benefits Review Board
P.O. Box 37601
Washington, DC 20013-7601

CALVIN T. KANESHIRO

Claimant-Petitioner

**BRB No. 97-0596**

v. **NOT PUBLISHED**

**DATE ISSUED:** Nov 17 1997

HOLMES & NARVER, INCORPORATED

and

WAUSAU INSURANCE COMPANIES

Employer/Carrier-Respondents

**DECISION and ORDER**

Appeal of the Decision and Order on Remand - Denying Benefits of David W. Di Nardi, Administrative Law Judge, United States Department of Labor.

Ronald P. Tongg (Tongg and Tongg), Honolulu, Hawaii, for claimant.

Robert C. Kessner and James Duca (Kessner Duca Umebayashi Bain & Matsunaga), Honolulu, Hawaii, for employer/carrier.

Before: HALL, Chief Administrative Appeals Judge, DOLDER and McGRANERY, Administrative Appeals Judges.

PER CURIAM:

Claimant appeals the Decision and Order on Remand-Denying Benefits (91-LHC-2518) of Administrative Law Judge David W. Di Nardi rendered on a claim filed pursuant to the provisions of the Longshore and Harbor Worker's Compensation Act, as amended, 33 U.S. C. §901, was extended by the Defense Base Act, 42 U.S.C. §1651 et seq. (the Act). We must affirm the findings of fact and conclusions of law of the administrative law judge, which are rational, supported by substantial evidence, and in accordance with law. O'Keeffe v. Smith, Henchman & Grylls Associates, Inc., 308 U. S. 359 (1965); 33 U.S.C. §921(b)(3).

This is the second time that this case is before the Board. To briefly reiterate, claimant was employed ads a waiter/cook from January 20, 1954, to January 19, 1955, from February 16, 1955, to November 15, 1955, and from December 16, 1955, to June 11, 1956, on the Enewetak and Bikini Atolls, during which time those atolls were being utilized by the Atomic Energy Commission and the Joint Chiefs of Staff for atomic weapons testing programs. In January 1989, claimant was diagnosed with chronic granulocytic leukemia (CGL). Claimant sought total disability benefits under the Act, alleging that his exposure to radiation during the course of his employment with employer resulted in his CGL.

In the initial Decision and Order, Administrative Law Judge G. Marvin Bober found, inter alia, that claimant established his prima facie case based upon his exposure to radiation and the diagnosis of CGL, that claimant was thus entitled to the presumption of causation at 33 U.S.C. §920(a), and that employer failed to establish rebuttal of that presumption. Accordingly, Judge Bober awarded claimant temporary total disability compensation commencing January 17,

1989, and continuing, interest on any accrued unpaid compensation benefits, penalties under Section 14(e), 33 U.S.C. §914(e), and medical benefits. On appeal, the Board affirmed the administrative law judge's invocation of the Section 20(a) presumption, vacated the administrative law judge's finding that employer failed to establish rebuttal, and remanded the case for the administrative law judge to address all of the medical evidence of record when determining whether employer established rebuttal of the Section 20(a) presumption. Kaneshiro v. Holmes & Narver, Inc., BRB No 93-1370 (March 14, 1996)(unpublished).

On remand, the case was transferred to Administrative Law Judge Di Nardi (hereinafter the administrative law judge). In his decision on remand, the administrative law judge found that employer established rebuttal of the Section 20(a) presumption based on the medical opinions of Drs. Fry, Goldman, Fabrikant, Moloney, and Auxier. The administrative law judge subsequently weighed al the evidence of record and found that claimant had failed to establish that his condition arose out of his employment. Accordingly, the administrative law judge denied that instant claim for benefits.

Claimant now appeals challenging the administrative law judge's determination that employer's evidence is sufficient to establish rebuttal of the Section 20(a) presumption. Employer responds, urging affirmance of the administrative law judge's denial of benefits.

Once the Section 20(a) presumption is invoked, the burden shifts to employer to rebut the presumption with substantial evidence that claimant's condition was not caused or aggravated by his employment. See Manship v. Norfolk & Western Railway Co., 30 BRBS 175 (1996). It is employer's burden on rebuttal to present specific and comprehensive evidence sufficient to sever the causal connection between the injury and the employment. See Peterson v. General Dynamics Corp., 25 BRBS 71 (1991), aff'd sub nom. Ins. Co. of North America v. U.S. Dept. of Labor, 969 F.2d 1400, 26 BRBS 13(CRT)(2d Cir. 1992), cert. Denied, 113 S. Ct. 1253 (1993); see also Swinton v. J. Frank Kelly, Inc., 554 F. 2d 1075, 4 BRBS 466 (D.C. Cir.), cert. Denied, 429 US. 820 (1976). In establishing rebuttal of the presumption, proof of another agency of causation is not necessary. See Stevens v. Todd Pacific Shipyards, 14 BRBS 626 (1982)(Kalaris, J.,

concurring and d9ssenting), aff'd mam. 722 f. 2d 747 (9th Cir. 1983), cert. Denied. 467 U.S. 1243 (1984). Rather, the testimony of a physician, if credited by the administrative law judge that no relationship exists between an injury and claimant's employment is sufficient to rebut the presumption. See Kier v. Bethlehem Steel Corp., 16 BRBS 12B (1984). If the administrative law judge finds that the Section 20(a) presumption is rebutted, he must weigh all of the evidence and resolve the causation issued based on the record as a whole. See Devine v. Atlantic Container Lines, G.I.E., 23 BRBS 270 (1990).

The administrative law judge found that the evidence submitted by employer, specifically the opinions of Drs. Fry, Goldman, Fabrikant, Maloney, and Auxier, was sufficient to rebut the presumed causal link between claimant's CGL and his exposure to radiation while working for employer. In addressing whether claimant's CGO arose out of his radiation exposure, Dr. Fry[1] concluded that there was no

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[1] Dr. Fry, who hold's a master's degree in public health, is a physician as well as a member of the teaching faculty of the Oak Ridge associated Universities. EX 23.

evidence of a causal association between claimant's condition and his exposure. EX 22 at15. Dr. Goldman[2] concluded that there was a 99.5% chance that claimant's, leukemia was caused by agents other than his radiation exposure, CX 6 at 4, and that it was extremely unlikely that it was due to claimant's radiation exposure. EX 19. Dr. Fabrikant[3] stated that claimant's exposure between 1954 and 1956 did not cause his leukemia, HT IV at 171-172, and that the medical evidence precluded any causal link between claimant's exposure to radiation and claimant's subsequent illness. HT IV at 177. Dr. Maloney[4]opined that a radiation-induced etiology for claimant's illness was unacceptable. EX 27 at 3. Lastly, Dr.

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[2] Dr. Goldman holds a doctorate in radiation biology and is professor of radiobiology at the Department of Radiology, School of Medicine, University of California at Davis. EX 20.

[3] Dr. Fabrikant is a physician, research professor of medicine and radiology, and author of publications on the relationship between radiation and illness. EX 25.

[4] Dr. Maloney is a physician, research scientist, professor emeritus of Harvard Medical School, and author of various articles on radiation -induced illness. EX20

Auxier[5] found the lack of a causal connection between claimant's exposure and his CGL Based on statistical studies that reported no enhanced rate of leukemia as a result of low rates of radiation exposure. Ht iii at 247-248.

In support of his contention on appeal, claimant avers that the aforementioned opinions credited by the administrative law judge are insufficient to establish rebuttal of the Section 20(a) presumption because they are not supported by definitive studies or affirmative underlying evidence. See Daubert v. Merrill Dow Pharmaceuticals Inc., 509 U.S. 579 (1993). Specifically, claimant contends that the opinions credited by the administrative law judge were based on statistics and studies reflecting that there were no cases connecting claimant's radiation dose and long latency period (33 to 35 years) with CGL; this absence of any demonstrated evidence of low doses of radiation resulting

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[5] Dr. Auxier, who has a master's degree in health physics and a doctorate degree in nuclear engineering, is director of Health Physics at Oak Ridge National Laboratory. EX22, Appendix 1.5

in CGL over an extended latency period, claimant contends, is not the equivalent of proving that such exposure does not cause CGL.

Contrary to claimant's contention, the Board has held that physician's medical opinion, regardless of the fact that definitive study on the illness in question has not been done, may server the connection between a claimant's injury and his employment if the opinion is specific and comprehensive. See Neeley v. Newport News Shipbuilding & Dry Dock Co., 19 BRBS 138 (1986). In concluding that employer rebutted the presumption, the administrative law judge noted the pre-eminent qualifications and international stature employer's witnesses and determined that the scientific data presented by each of employer's experts was persuasive and credible. Accordingly, as the opinions of Drs. Fry, Goldman, Fabrikant, Maloney, and Auxier server the causal link between claimant's radiation exposure and his CGL, we affirm the administrative law judges' finding that the Section 20(a) presumption is rebutted. See Phillips v. Newport News Shipbuilding & Dry Dock Com., 22 BRBS 94 (1988).

Lastly, the administrative law judge, based upon the clear weight of both the qualifications of employer's witnesses a well as the soundness of their scientific reasoning, concluded that causation had not been established based upon the record as a whole. As this conclusion is not challenged on appeal by claimant, it is affirmed. See Director, OWCP v. Greenwich Collieries, 512 U.S. 267, 28 BRBS 43 (CRT)(1994).

Accordingly, the administrative law judge's Decision and Order on Remand Denying Benefits is affirmed.

**SO ORDERED.**

s/_____
BETTY JEAN HALL,
Chief Administrative Appeals Judge

s/_____
NANCY S. DOLDER,
Administrative Appeals Judge

s/_____
REGINA C. McGRANERY,
Administrative Appeals Judge

APPENDIX H

**U.S. Department of Labor**
Office of Administrative Law
John W. McCormack
Post Office and Courthouse
Boston, Massachusettes 02109
Room 507
(617) 223-4254
(FAX) (617) 223-9355

In the Matter of:

CALVIN T. KANESHIRO,
Claimant

**BRB No. 93-1370**

Against

**Case No. 91-LHC-2518**

**OWCP No. 15-32725**

HOLMES & NARVER, INC.,
Employer

and

WASAU INSURANCE COMPANIES,
Carrier

and

DIRECTOR, OFFICE OF WORKERS'

COMPENSATION PROGRAMS, UNITED STATES DEPARTMENT OF LABOR
Party-in-interest

Appearances:

Ronald P. Tongg, Esp.
For the Claimant

B. James Finnegan, Esp.
James N. Duca, Esp.
Robert C. Kessner, Esq.
For the Employer/Carrier

(No Appearance)
For the Director

BEFORE: DAVID W. DI NARDI
Administrative Law Judge

**DECISION AND ORDER ON REMAND - DENYING BENEFITS**

This is a claim for worker's compensation benefits under the Longshore and Harbor Workers' Compensation Act, as amended (33 U.S.C. §901, et seq.), as extended by the Defense Base Act, 42 U.S.C. § 1651, et seq., herein jointly referred to as the "Act." The hearing was held in Honolulu, Hawaii, at which time all parties

were given the opportunity to present evidence and oral arguments. The following references will be used: TR for the official hearing transcript, ALJ EX for an exhibit offered by this Administrative Law Judge. CX for a Claimants exhibit and RX for an exhibit offered by the Employer/Carrier. This decision is being rendered after having given full consideration to the entire record.

## Procedural History

This case involves a claim under provisions of the Longshore and Harbor Workers' Compensation Act and the Defense Base Act. The claimant, Mr. Calvin T. Kaneshiro, served as a cook for Holmes & Narver (Employer) a civilian contractor at the Pacific Provings Ground, during the 1954-1956 nuclear weapons tests known as Operations Castle and Redwing. These tests were conducted in the South Pacific under the supervision of the Atomic Energy Commission, which is the precursor of the United States Department of Energy. During his employment, Claimant was stationed either on Parry Island in the Enewetok Atoll or Fox Island in the Bikini Atoll.

In 1989, Claimant was diagnosed as suffering from chronic granulocytic leukemia ("CGL"). The Claimant alleges that this illness was the result of the radiation exposure that he sustained at the Pacific Provings grounds, and he estimates that his exposure was 6.3 rem,[1] rather than the 3 rem or less calculated by the Employer's witnesses.[2] Most of the

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[1] A rem (short for "roentgen equivalent man") is a measurement of radiation exposure. Specifically, it is the dosage of ionizing radiation that will cause the same biological effect as one roentgen of gamma ray dosage.

[2] During most of the Claimant's tenure at the Pacific Proving Grounds, he wore the radiation badges issued to all employees to measure their exposure to radiation. These badges have been maintained all these years by the Department of Energy, and Mr. Kaneshiro's actual film badges were entered into evidence as EX-103. The Claimant's radiation exposure measured by his radiation badges during all periods of employment was 1.13 rem. There is a factual dispute concerning the extent to which the Claimant received exposure in addition to the exposure measured by these badges (i.e., "unbadged exposure"). The Employer calculates that unbadged exposure was less than

exposure that Claimant claims to have incurred, i.e., 4.5 of the 6.3 rem total alleged exposure, was allegedly sustained on the day after the Seminole weapons test during a trip to an island that Claimant could not identify, when this "Mystery Island" was presumably highly radioactive. The employer's evidence, through Mr. Taft and Colonel Jacks, was that the island visited by Claimant could not be the island (Clara Island) that Claimant's expert, Mr. Manly, claimed it to be, and that it was both purposeless and impossible for Claimant to have traveled to Clara Island or any other highly radioactive island at the time and in the manner hypothesized by Mr. Manly. The Employer contends that the Claimant sustained none of the 4.5 rem of unbadged exposure that is hypothesized by Mr. Manly for this alleged trip to Clara, and instead sustained only the 0.13 rem exposure measured by his radiation badges during this period.

The hearing was presided over by Associate Chief Law Judge G. Marvin Bober and by **Decision and Order Awarding Benefits** dated March 11, 1993, Judge Bober

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2 rem, for a total exposure (badged and unbadged) of 2-3 rem.

awarded benefits as he had concluded that Claimant had established a **prima facie** case of compensability based upon his exposure to the radiation and the diagnosis of his causation under Section 20 (a) of the Act (herein "Section 20 (a) presumption"). Judge Bober further found that Employer and Carrier had failed to rebut that presumption and he awarded Claimant temporary total disability compensation commencing January 17, 1989, and continuing, interest on any accrued unpaid compensation benefits, and penalties under Section 14 (e), 33 U.S.C. Section 914 (e), for the period from January 17, 1989 to December 8, 1989, as well as medical benefits.

On appeal to the Benefits Review Board (herein "Board"), by **Decision and Order** issued on March 18, 1996, the Board affirmed Judge Bober's invocation of the Section 20 (a) presumption, but vacated his finding that Employer had failed to establish rebuttal of the Section 20 (a) presumption and remanded the case for reconsideration of the issue of causation. As the basis for its ruling, the Board indicated that, although Judge Bober had addressed the underlying studies supporting the medical conclusions of Drs.

Goldman and Fabrikant, he did not discuss their conclusions themselves. The Board further indicated that Judge Bober did not address other medical testimony, specifically the opinions of Dr. Fry and Dr. Moloney, which, if credited by him, would have been sufficient to establish rebuttal of the Section 20 (a) presumption.

On remand, the Board directed that the Administrative Law Judge address all of the medical evidence of record, including the opinions of Drs. Goldman, Fabrikant, Fry and Moloney, when determining whether Employer established rebuttal of the Section 20 (a) presumption, and if that presumption is rebutted, the Administrative Law Judge must then weigh all the evidence in the record as a whole and render a decision based on the totality of the closed record as perfected by the parties.

The record was docketed at the Office of Administrative Law Judges and Associate Chief Judge James Guill, by ORDER dated August 9, 1996 (ALJ EX A) denied Claimant's request for a reconvened hearing, advised the parties that Judge Bober is no longer available to the Office of Administrative Law Judges and the parties were given thirty (30) days to comment on

transfer of the claim to another Administrative Law Judge for a decision on the record. The matter was then assigned to this Administrative Law Judge and the parties were advised of such reassignment by ORDER dated September 4, 1996 (ALJ EX B) and they were given until October 18, 1996 to file briefs on the issues identified by the Board in its decision. The Employer requested a forty - five (45) day extension of time for the parties to file their briefs. (RX A) The request was granted (ALJ EX C) and Claimant, in the interim filed and opposition to the extension, a motion received after this Administrative Law Judge had granted the extension. (CX A) The extension was denied and the original briefing schedule was reinstated. (ALJ EX D) Respondents' brief was filed on October 21, 1996 (RX B) and Claimant's brief was filed on October 22, 1996 (CX B), at which time the record was closed.

The Findings of Fact and Conclusions of Law made by Judge Bober, to the extent not disturbed by the Board, are binding upon the parties herein, are incorporated herein by reference and will be reiterated herein only for purposes of clarity and to deal with the Board's mandate.

## SUMMARY OF THE EVIDENCE

The Claimant's illness, CGL, is one that has numerous causes, known and unknown. Most of the leukemias are in some way associated with hereditary disorders. TR IV: 85:22. It is undisputed that ionizing radiation can, at sufficiently high exposures (i.e., exceeding 50 rem), cause an increased rate of incidence of CGL during the latency period for that illness. However, radiation exposure of 20 rem or less is highly unlikely to induce leukemia, and when it does so, the disease occurs much earlier that in the 33-year + latency period of Mr. Kaneshiro. The factual questions that are disputed concern the amount of radiation that the Claimant sustained during his work at the Pacific Provings Grounds, and whether the Claimant's age at exposure and length of time before the diagnosis of his leukemia made it more probable that not that the exposure that Claimant sustained caused his illness.[3] Whether this Administrative

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[3]The length of time between the Claimant's radiation exposure and the diagnosis of his disease is called the latency period.

Law Judge chooses to rely upon a weighing of the qualifications and stature of the competing expert witnesses, or chooses instead to explore the complex details and logic of their data and reasoning, the conclusion will be the same: that the weight of evidence overwhelmingly supports the Respondents' position that the Claimant's leukemia was not caused by any radiation exposure while working for the Employer.

The trial record in this case includes the oral and written testimony of five qualified expert witnesses who have concluded that there was no evidence of a casual association between the Claimant's CGL and his employment-related exposure to radiation. These witnesses are Drs. Fabrikant, Goldman, Fry, Moloney and Auxier. The pre-eminent qualifications and international stature of these witnesses are described in their respective Curricula Vitae and their qualifications will be mentioned here only briefly.

From Employers Briefs p. 8 10

Dr. Fabrikant is a physician, a professor of medicine, a professor of radiology, a research scientist and the author of numerous publications on the relationship between radiation and illness.

His curriculum vitae are contained at Appendix 1.1, EX-25.

Dr. Fabrikant's conclusions on the causation issue were:

> My medical opinion is that the radiation dose that is estimated ... that was received chronically between 1954 and 1956 did not cause Mr. Kaneshiro's granulocytic leukemia. (TR IV, 171:24-172:4).

From Employers Briefs p. 17

Dr. Fabrikant also stated that, when CGL results from ionizing radiation, the illness appears much earlier than Claimant's 30-year+latency period and that:

> ... [I] can only conclude that the evidence precludes any causation associated between the exposure in 1954 to '56 and the subsequent appearance of leukemia some three decades later. (TR-IV, 177:13-22).

Dr. Goldman testified in writing to the same effect. Although Dr. Goldman is not a physician, he teaches at a medical school. He holds a Ph.D. in radiation biology and, for the 20 years preceding the trial, had been a professor of radiobiology at the Department of Radiology, School of Medicine, at the University of California at Davis. A copy of his curriculum vitae is reproduced in EX-20, Appendix 1.2. Dr. Goldman's testimony was that:

> A careful analysis of increased granulocytic leukemia incidents in irradiated persons has shown a clear pattern between time after exposure and risk. The radiation risk rises after a "silent" two-year latent period following exposure to a peak some three to six years later, and then rapidly "fades" after about 10-15 years, approaching "natural levels" by about 15-20 years after exposure. (EX-19 at 3, Appendix 2.2)

Based on what Dr. Goldman described as the Claimant's very low radiation dose and exceedingly long latency interval, he concluded that it was extremely unlikely that the Claimant's leukemia was due to his radiation exposure in the Pacific during the mid-1950's. (EX-19 at 3-4, Appendix 2.2).

From Employers Briefs p. # 7,8

The Employer's evidence also included the written testimony of Dr. Shirley Fry, whose report and curriculum vitae were combined into EX-23 (in evidence as Appendix 1.3). Dr. Fry is a physician as well as a member of the teaching faculty of the Oak Ridge Associated Universities, which manage a Department of Energy facility, and was the head of the health and mortality study of 600,000 present and former contractor employees who had received occupational radiation exposure while employed at Department of Energy facilities since 1947.

Dr. Fry stated:

> In my opinion, based upon the currently available data, there was no evidence of a causal connection between chronic granulocytic

> leukemia in adults previously exposed to low-levels of radiation. EX-22 at 15, Appendix 1.6.

Dr. Moloney is a physician, a research scientist, and a professor of medicine emeritus at the Harvard Medical School. Like Dr. Fabrikant, Dr. Moloney is the author of numerous articles on radiation-induced illnesses. A copy of his curriculum vitae is reproduced in EX-28, Appendix 1.4.

From Employers Briefs p. 8

Dr. Moloney's conclusion is stated in EX-27, Appendix 2.3:

> In my experience, CGL reaches a peak of about 5 years after exposure and practically disappears within 10 to 15 years. I know of no proven cases of CGL due to low-level radiation, and I believe in the case of Calvin Kaneshiro the 30 year latent period make a radiation-induced etiology unacceptable. (Id. at 3.)

Dr. Auxier, director of Health Physics at the Oak Ridge National Laboratory, also testified that the scientific data gives no evidence of a causal connection between leukemia and radiation exposure where the exposure is less than 20 rem.

> If we look at the hard data that we have from different places in the world but primarily from the Japanese survivors, we see a hint of leukemia in the range of 20 to 50 rem. We see statistically valid, discernible leukemia 50 to 100 rem. And above that, the correlation is easy. (TR-3, 247:24-248:4).

From Employers Briefs p. 9

A copy of Dr. Auxier's curriculum vitae is reproduced in Appendix 1.5

Thus, the Respondents submit that they have rebutted the statutory presumption in the Claimant's favor through the unequivocal testimony of five medical and scientific witnesses of unimpeachable credentials, each of whom denied any credible link between CGL and radiation exposure where the exposure was

From Employers Briefs p. 9

at the low dosage levels involved in this case and the latency period was as long as the Claimant's.

Respondents submit that this claim must be denied on remand from the Board because Claimant's evidence is not sufficient to support a finding of the requisite causal connection between his CGL and his employment with the Employer joined herein, Respondents faulting the evidence presented by the Claimant.

The Claimant's expert witnesses were seriously deficient with respect to all three of the categories of specialized knowledge required. Mr. Manly, upon whose testimony the Claimant primarily relied, has no background in the retrospective calculations of radiation doses, whether from nuclear weapons or otherwise.

From Employers Briefs p. # 12

Similarly, he has no background in the science of epidemiology or epidemiologic statistics. Finally, he has no background whatsoever in radiation medicine. Thus, he is unqualified to make medical or statistical judgments. Mr. Manly is neither a physician, an academic, an

From Employers Briefs p. # 12

epidemiologist or a research scientist. Respondents point out that Mr. Manly had never previously participated in the authorship of epidemiologic or other research studies, and his qualifications to evaluate, interpret and apply epidemiologic studies were never presented. His education was in the areas of engineering, physics or health physics. He holds neither an M.D. nor a Ph.D. degree. There is no indication in his educational or vocational background of any research studies or prior experience in connection with the determination of the causes of leukemia. It is doubtful whether his qualifications were sufficient even to make his testimony admissible evidence under the rule that experts must be experts on the issue to which their testimony is directed, and not simply experts in vaguely analogous fields. **See, e.g., In re TMI Litigation Cases Consolidated II**, 911F. Supp. 775, 798 (M.D. Pa. 1996); **Hughes v. Hemingway Transport, Inc.**, 539 F. Supp. 130 (E.D. Pa. 1982); Wilkinson **v. Rosenthal**, 712 F. Supp. 474 (E.D. Pa. 1989); **Miller v. Silver**, 181 Cal. App. 3d 652 (1986).

Respondents concede that Claimant's other expert, Dr. Rajdev, was certainly qualified to treat leukemia

(whether induced by ionizing radiation or from other causes). He is a certified hematologist, internist and oncologist. However, he has acknowledged that his primary focus is the treatment of cancer, the etiology of the disease being "secondary in caring for the patient." (TR-II, 35:3-7). Nothing in Dr. Rajdev's education or experience indicates any professional skills in connection with the retrospective calculation of radiation dosages, and he gave no testimony on that subject. Similarly, there is nothing in Dr. Rajdev's education or professional experience indicating any academic training or participation in epidemiologic studies, and particularly studies involving the health risks to radiation workers, or health risks in connection with nuclear weapons tests.

From Employers Brief p. 13

On the contrary, Dr. Rajdev's testimony modestly and properly disclaimed any knowledge of what the threshold radiation dosage would have to be before some causal effect as to the development of CGL would occur. (TR-II, 57:9-58:10). Dr. Rajdev indicated unfamiliarity with the epidemiologic studies done on American workers at the Oak Ridge Tennessee plant (TR-II, 59:18-23) and the 1992 NRRW study discussed by Mr.

Manly. (TR-II, 61:16-24). Dr. Rajdev, acknowledging his limitations, candidly agreed that, in terms of the relationship between Claimant's radiation exposure and his illness, "I would have to defer to the experts in that field." (TR-II, 62:3-8).

Respondents further submit that Dr. Rajdev testified to the rudimentary but unhelpful fact that, at a certain dosage level (which he was unable to specify), radiation exposure can enhance to some degree, for some degree, for some people, and for some latency period, the risk of incurring CGL. However, Dr. Rajdev did not profess knowledge sufficient to discuss the relationship among the relevant variables, and was neither prepared nor qualified to do so. The Claimant offered no expert testimony beyond that of Mr. Manly and Dr. Rajdev.

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In contrast to the Claimant's witnesses, the credentials of the expert witnesses testifying on behalf of the Respondents were truly first-rate, according to Respondents. Unlike Mr. Manly, who had no experience whatsoever with respect to calculating radiation exposure from nuclear weapon tests, the Respondents' witnesses on the question of calculating the

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Claimant's employment-related radiation exposure included several individuals with extensive personal knowledge of the facts underlying their opinions, and prior experience with retroactive dose calculation. These witnesses included Dr. John Auxier, Mr. Robert Taft and Colonel Gordon Jacks, and their testimony will be discussed below.

On the basis of the totality of this closed record, I make the following:

## Additional Findings of Fact and Conclusions of Law

This Administrative Law Judge, in arriving at a decision in this matter, is entitled to determine the credibility of the witnesses, to weigh the evidence and draw his own inferences from it, and he is not bound to accept the opinion or theory of any particular medical examiner. **Banks v. Chicago Grain Trimmers Association, Inc.**, 390 U.S. 459 (1968), **reh. denied,** 391 U.S. 929 (1969); **Todd Shipyards v. Donovan, 300** F.2d 741 (5th Cir. 1962); **Hite v. Dresser Guiberson Pumping,** 22 BRBS 87, 91 (1989); **Anderson v. Todd Shipyard Corp.** 22 BRBS 20, 22 (1989); Hughes **v. Bethlehem Steel**

**Corp.**, 17 BRBS 153 (1985); **Seaman v. Jacksonville Shipyard Inc.**, 14 BRBS 148.9 (1981); **Brandt v. Avondale Shipyards, Inc.**, 8 BRBS 698 (1978); **Sargent v. Matson Terminal, Inc.**, 8 BRBS 564 (1978). At the outset it further must be recognized that all factual doubts must be resolved in favor of the claimant. **Wheatley v. Adler**, 407 F 2d 307 (D.C. Cir. 1968); **Strachan Shipping Co. v. Shea**, 406 F.2d 521 (5th Cir. 1969), **cert. denied**, 395 U.S. 921 (1970). Furthermore, it consistently has been held that the Act must be construed liberally in favor of the claimant. **Voris v. Eikel**, 346 U.S. 328 (1953); **J.V. Vozzolo, Inc. v. Britton**, 377 F.2d 144 (D.C. Cir. 1967). Based upon the humanitarian nature of the Act, claimants are to be accorded the benefit of all doubts. **Durrah v. WMATA**, 760 F.2d 320 (D.C. Cir. 1985); **Champion v. S & M Traylor Brothers**, 690 F.2d 285 (D.C. Cir. 1982); **Harrison v. Potomac Electric Power Company**, 8 BRBS 313 (1978).

The Act provides a presumption that a claim comes within the provisions of the Act. See 33 U.S.C. §920 (a). This Section 20 presumption "applies as much to the nexus between an employee's malady and his employment activities as it does to any other aspect of a claim." **Swinton v. J.**

**Frank Kelly, Inc.**, 554 F2d 1075 (D.C. Cir. 1976), **cert. denied**, 429 U.S. 820 (1976). Claimant's uncontradicted credible testimony alone may constitute sufficient proof of physical injury. **Golden v. Eller & Co.**, 8 BRBS 846 (1978), **aff'd**, 620 F.2d 71 (5th Cir. 1980); **Anderson v. Todd Shipyards, supra** at 21; **Miranda v. Excavation Construction, Inc.**, 13 BRBS 882 (1981).

However, this statutory presumption does not dispense with the requirement that a claim of injury must be made in the first instance, nor is it a substitute for the testimony necessary to establish a **prima facie** case. The Supreme Court has held that a **prima facie** claim for compensation, to which the statutory presumption refers, must at least allege an injury that arose in the course of injury that arose in the course of employment as well as out of employment." Moreover, "the mere existence of a physical impairment is plainly insufficient to shift the burden of proof to the employer. **U.S. Industries/Federal Sheet Metal, Inc., et al., v. Director, Office of Workers' Compensation Programs, U.S. Department of Labor**, 455 U.S. 608, 102 S.Ct. 1318 (1982), **rev'g Riley v. U.S. Industries/Federal Sheet Metal, Inc.**, 627 F.2d 455 (D.C. Cir. 1980).

The presumption, though, is applicable once claimant establishes that he has sustained an injury, i.e., harm to his body. **Preziosi v. Controlled Industries,** 22 BRBS 468, 470 (1989); **Brown v. Pacific Dry Dock Industries,** 22 BRBS 284, 285 (1989); **Trask v. Lockheed Shipbuilding and Construction Company,** 17 BRBS 56, 59 (1985); **Kelaita v. Triple A. Machine Shop,** 13 BRBS 326 (1981).

To establish a **prima facie** claim for compensation, a claimant need not affirmatively establish a connection between work and harm. Rather, a claimant has the burden of establishing only that (1) the claimant sustained physical harm or pain and (2) an accident occurred in the course of employment, or conditions existed at work, which could have caused the harm or pain **Kelaita, supra; Kier v. Bethlehem Steel Corp.,** 16 BRBS 128 (1984). Once this **prima facie** case is established, a presumption is created under Section 20(a) that the employee's injury or death arose out of employment. To rebut the presumption, the party opposing entitlement must present substantial evidence proving the absence of or severing the connection between such harm and employment or working conditions. **Kier,**

**supra; Parsons Corp. of California v. Director, OWCP,** 619 F.2d 38 (9th Cir. 1980); **Butler v. District Parking Management Co.**, 363 F.2d 682 (D.C. Cir. 1966); **Ranks v. Bath Iron Works Corp.**, 22 BRBS 301, 305 (1989). Once claimant establishes a physical harm and working conditions, which could have caused or aggravated the harm or pain the burden shifts to the employer to establish that claimant's condition was not caused or aggravated by his employment. **Brown v. Pacific Dry Dock**, 22 BRBS 284 (1989); **Rajotte v. General Dynamics Corp.**, 18 BRBS 85 (1986). If the presumption is rebutted, it no longer controls and the record as a whole must be evaluated to determine the issue of causation. **Del Vecchio v. Bowers**, 296 U.S. 280 (1935); **Volpe v. Northeast Marine Terminals**, 671 F.2d 697 (2d Cir. 1981). In such cases, I must weigh all of the evidence relevant to the causation issue, resolving all doubts in claimant's favor. **Sprague v. Director, OWCP**, 688 f.2d 862 (1st Cir. 1982); **MacDonald v. Trailer Marine Transport Corp.**, 18 BRBS 259 (1986).

In this case **sub judice**, Claimant alleges that the harm to his bodily frame, **i.e.**, his CGL resulted from working conditions at the Employer's facility.

In the case at bar, the Respondents have introduced specific and comprehensive evidence severing the chain between Claimant's CGL and his employment with the Employer. Thus, the presumption falls out of the case, does not control the result herein and I shall now proceed to weigh and evaluate all of the evidence in this closed record, resolving all doubts, as I must, in Claimant's favor so as not to result in "a harsh and incongruous result."

**Injury**

The term "injury" means accidental injury or death arising out of and in the course of employment, and such occupational disease or infection as arises naturally out of such employment or as naturally or unavoidably results from such accidental injury. **See** 33 U.S.C. §902 (2); **U.S. Industries/Federal Sheet Metal, Inc., et al., v. Director, Office of Workers Compensation Programs, U.S. Department of Labor,** 455 U.S. 608, 102 S.Ct. 1312 (1982), **rev'g Riley v. U.S. Industries/Federal Sheet Metal, Inc.,** 627 F.2d 455 (D.C. Cir. 1980). A work-related aggravation of a pre-existing

condition is an injury pursuant to Section 2(2) of the Act. Gardner v. Bath Iron Works Corporation, 11 BRBS 556 (1978), aff'd sub nom. Gardner v. Director, OWCP, 640 F.2d 1385 (1st Cir. 1981); Preziosi v. Controlled Industries, 22 BRBS 468 (1989); Janusziewicz v. Sun Shipbuilding and Dry Dock Company, 22 BRBS 376 (1989); (Decision and Order on Remand); Johnson v. Ingalls Shipbuilding 22BRBS 160 (1989); Madrid v. Coast Marine Construction, 22 BRBS 148 (1989). Moreover, the employment-related injury need not be the sole cause, or primary factor, in a disability for compensation purposes. Rather, if an employment-related injury contributes to, combines with or aggravates a pre-existing disease or underlying condition, the entire resultant disability is condensable. Strachan Shipping v. Nash, 782 F.2d 513 (5th Cir. 1986); Independent Stevedore Co. v. O'Leary, 357 F.2d 812 (9th Cir. 1966); Kooley v. Marine Industries Northwest, 22 BRBS 142 (1989); Mijangos v. Avondale Shipyards, Inc., 19 BRBS 15 (1986); Rajotte v. General Dynamics Corp., 18 BRBS 85 (1986). Also, when claimant sustains an injury at work which is followed by the occurrence of a subsequent injury or aggravation outside work, employer is

liable for the entire disability if that subsequent injury is the natural and unavoidable consequence or result of the initial work injury **Bludworth Shipyard, Inc. v. Lira**, 700 F.2d 1046 (5th Cir. 1983); **Mijangos, supra; Hicks v. Pacific Marine & Supply Co.**, 14 BRBS 549 (1981. The term injury includes the aggravation of a pre-existing no-work-related condition or the combination of work- and non-work-related conditions. **Lopez v. Southern Stevedores**, 23 BRBS 295 (1990); **Care v. WMATA**, 21 BRBS 248 (1988).

In occupational disease cases, there is no "injury" until the accumulated effects of the harmful substance manifest themselves and claimant becomes aware, or in the exercise of reasonable diligence or by reason of medical advice should become have been aware, of the relationship between the employment, the disease and the death or disability. **Travelers Insurance Co. v. Cardillo**, 225 F.2d 137 (2d Cir. 1955), **cert. denied**, 350 U.S. 913 (1955). **Thorud v. Brady-Hamilton Stevedore Company, et al.**, 18 BRBS 232 (1987); **Geisler v. Columbia Asbestos, Inc.**, 14 BRBS 794 (1981). Nor does the Act require that the injury be traceable to a definite time. The fact that claimant's injury occurred gradually over a

period of time as a result of continuing exposure to conditions of employment is no bar to a finding of an injury within the meaning of the Act. **Bath Iron Works Corp. v. White**, 584 F.2d 569 (1st Cir. 1978).

On the basis of the totality of this closed record, I find and conclude that Claimant's CGL did not result from any radiation exposure he may have incurred while he was employed by this Employer. In so finding, I have accepted, as more probative and more persuasive, the evidence offered by the Respondents as this evidence far outweighs the evidence offered by the Claimant.

At the outset I note that Respondents' experts possess greater academic and professional qualifications, are noted experts in their respective fields and their forthright and unequivocal opinions withstood intense cross-examinations by Claimant's attorney. I will first discuss Claimant's radiation exposure level.

Dr. Auxier has a master's degree in health physics and a doctorate in nuclear engineering from the Georgia Institute of

Technology.[4] He has spent the last 30 years of his life in work and research involving radiation, health, physics and dosimetry.[5] (TR-III, 220:10). From 1955 until 1982, he worked with the Oak Ridge National Laboratory, spending the last 10 years as Director of its Health Physics Division. Between 1962 and 1972, he was chief of the radiation dosimetry program of the Oak Ridge National Laboratory, and his earlier work with that laboratory involved radiation dosimetry studies for the survivors of the atomic bombings of Hiroshima and Nagasaki. (TR-III, 219:5-11).

Dr. Auxier directed the study of the Hiroshima and Nagasaki survivors. (TR-III, 221: 15-23). Dr Auxier had extensive personal experiences doing dosimetry studies at nuclear weapons test sites for the United States Government.

> We participated in all weapons test series, or I did and my folks, from 1955 through about 1962, in

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[4] Dr. Auxier was primarily a witness on the quantification of the radiation exposure.

[5] Dosimetry is the science of measuring radiation exposure.

> the Nevada test sites.... And so we were involved in probably between 35 and 40 tests over these years. And made measurements, extensive measurements for some 40 weapons. (TR-III at 224).

In 1979, Dr. Auxier was the head of the task group on radiation dosimetry for the President's Commission on the accident at Three-Mile Island. (EX-24, at 3, Appendix 1.5). Dr. Auxier's professional work included both live, ongoing real time measurements of radiation dosimetry from nuclear weapon tests, and retrospective dosimetry calculations. (TR-III, 223:15-234:4).

Unlike Mr. Manly, Dr. Auxier was personally acquainted with the islands comprising the Pacific Proving Grounds, having been on that site many times. (TR-III, 228:3-15). He had personally visited the island known as Kirunu or Clara, the "Mystery Island" (never visited by Mr. Manly) where Mr. Manly posits that 71% of the unbadged alleged exposure) was supposedly incurred while the Claimant

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was unbadged. Clearly, Dr. Auxier had academic credentials superior to Mr. Manly's and decades of actual work experience on dosimetry issues, in contrast to Mr. Manly's complete lack of prior professional experience on such issues.

Dosage witnesses Robert Taft and Colonel Gordon Jacks had extensive personal experience in radiation safety procedures during the nuclear weapons tests known as Operations Castle and Redwing, the tests in which Claimant's radiation exposure occurred. Their testimony is that the trip supposedly taken by Claimant to the island that Mr. Manly hypothesized to be Clara Island and that Mr. Manly hypothesized to have occurred one day after the Seminole weapons test, when the island was highly radioactive, contradicted the photographic evidence, the radiation badge records, the safety procedures then in effect the procedures on utilization of transportation vehicles then in effect, and any conceivable scientific or military testing purpose.

Mr. Taft was employed by the Atomic Energy Commission for 41 years, and was the radiological safety officer during those two operations. (TR-II, 338:20,

340:12 and 342:1). Colonel Jacks was in charge of Task Unit 7 of the United States Army. This was the radiological safety unit for operation Red Wing. The job of the that unit, as described by Colonel Jacks, was to:

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> Perform all ground and area monitoring services associated with scientific mission of TG 7.1 except those in conjunction with aircraft and airborne collection of scientific data.
>
> Assume responsibility for TG 7.5 for radiological safety during the operation phase of Red Wing.
>
> Provide all legal dosimetry services for joint task force 7.

Thus, unlike Mr. Manly, Respondents' witness had extensive personal experience in connection with nuclear weapons testing safety procedures and radiation exposure measurement, including experience in connection with the weapons tests in which Claimant was involved.

In contrast to both Mr. Manly and Dr. Rajdev, the Respondents' expert witnesses on the causation issue comprised some of the most qualified people in the world on issues involving the interpretation of epidemiologic data and the health effects of radiation. These people consisted of Drs. Fabrikant, Goldman, Fry, and Moloney.

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Dr. Fabrikant received his medical degree in 1956, and his Ph.D. in biophysics in 1964. He then returned to the John Hopkins School of Medicine, where he served as an advanced fellow in academic radiology. For five years, he was a practicing radiologist and a professor of radiologic science Hopkins School of Medicine. In 1970, he became a professor and the Hopkins School of Medicine. In 1970, he became a professor and the head of radiology at the University of Connecticut School of Medicine, and a special consultant to the Advisory Committee on the Biological Effects of Ionizing Radiation of the National Academy of Sciences. For the 20 years preceding his testimony, Dr. Fabrikant was a professor of medicine, professor of radiology, physician and author.

At the time of his testimony, Dr. Fabrikant was a professor of radiology at the University of California School of Medicine in San Francisco, and a professor of radiology at the graduate group of biophysics at the University of California in Berkeley. He was also the physician-in-chief at the Cowell Memorial Hospital of the University of California in Berkeley, and a senior scientist at the Lawrence Berkeley Laboratory. Dr. Fabrikant has chaired or been a member of each of the five "BEIR" committees (i.e., the Advisory Committee on the Biological Effects of Ionizing Radiation), and was the chairman of the BEIR-IV Committee. (TR-IV, 17:16-18; VII). Thus, Dr. Fabrikant was one of the authors of the BEIR Report that Mr. Manly was relying on (and badly misinterpreting, as discussed in Section IV B). A list of his extensive publication is included in his curriculum vitae, EX-25, Appendix 1.1. As a physician with a specialty in radiology and the holder of a doctorate in biophysics, Dr. Fabrikant was ideally qualified to address the scientific questions on which Mr. Manly had no qualifications whatsoever.

Dr. Moloney has been a research scientist and a physician in the field of

leukemia and hematology for 50 years. At the time of his report, Dr. Moloney was a professor of medicine emeritus at the Harvard Medical School. He has authored 225 separate publications relating to hematology, leukemia and the effects of ionizing radiation. (EX-28, Appendix 1.4). During the years 1952 through 1954, Dr. Moloney was the deputy director of research for the Atomic Bomb Casualty Commission, Hiroshima, Japan. He is a member of the Committee on Pathological Effects of Atomic Radiation of the National Academy of Sciences. He was a participant in research projects on the atomic bomb survivors in Hiroshima, and studied the effects of radioactive fallout from the Pacific Proving Grounds test series on the population of Orange lap Atoll in the Marshall Islands. Those efforts resulted in scholarly publications that he authored for the **New England Journal of Medicine, Science, Blood and the American Journal of Medicine.**

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Like Dr. Moloney, Dr. Marvin Goldman testified by way of a written report (EX-19, appendix 2.2). Dr. Goldman holds a Ph.D. in radiation biology from the University of Rochester, Department of Radiation Biology and biophysics. For the

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last 20 years, he has been a professor of radiobiology at the Department of Radiology, School of Medicine, University of California at Davis. For the five years preceding the date of his testimony, he has been the scientific group leader for health effects of the US/USSR joint coordination committee for civilian nuclear reactor safety.

Employer's fourth causation witness was Dr. Shirley Fry, a physician who also holds a master of public health degree form the University of North Carolina, Department of Epidemiology. She is a member of the teaching faculty of the Oak Ridge Associated Universities, and was the head of the health and mortality study conducted for the United States Department of Energy by the Center for Epidemiologic Research of the Oak Ridge Associated Universities. This study was a long-term follow-up of 600,000 present and former employees who had received occupational radiation exposure while employed at Department of Energy facilities since 1947. Dr. Fry's report (EX-22, Appendix 1.6) reviews and analyzes 45 epidemiologic studies published in the scientific literature since the late 1970's. Thus, unlike Dr. Rajdev (who

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acknowledged his unfamiliarity with any of the studies and confused American studies with Japanese studies), Dr. Fry was familiar with the large volume of pertinent epidemiologic research concerning radiation-induced illness.

In the case at bar, I note the very striking gap between the educational and professional qualifications of the expert witnesses on the two sides of the dose measurement and causation issues, with the balance weighing heavily in favor of the witnesses presented by the Respondents.

The parties concede that CGL has many causes, known and unknown, and that the pertinent variables in determining whether radiation exposure was a probable cause of the Claimant's leukemia are (1) the Claimant's age at time of exposure, (2) amount of radiation exposure (3) and latency period before the onset of the disease. There are 45 epidemiologic studies that have studied the effects of these variables on the incidence of leukemia.

On some of the scientific aspects of the case, there was no diversity of opinion. Dr. Rajdev believes that there are circumstances in which exposure to

radiation can induce leukemia. However, he testified that there is a threshold level of radiation exposure below which there is no causal effect for CGL, but Dr. Rajdev was simply unable to comment on the quantum of radiation necessary to produce ant enhanced risk of incurring CGL in a person 27 or 29 years old at the time of exposure (as was the Claimant), or on the amount by which that risk was enhanced, although he acknowledged that there was some level of exposure below which there was no enhanced risk. He was also in no position to assess whether the 33- or 35-year latency period of the Claimant (i.e., the period between the time of exposure and the disease was diagnosed (made the inference of causation implausible for Claimant's illness. He pointed to no clinical or pathologic evidence that suggested that Claimant's illness was caused by radiation exposure from any source, and acknowledged that, of the 12 patients with CGL that he is treating, the Claimant was the only one with a history of radiation exposure beyond the ordinary. (TR-II, 52:2-8.) He also agreed that the etiology of CGL in the 11 other patients was unknown. (TR-II, 53:6.)

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In short, Dr. Rajdev did not controvert the Respondents' extensive evidence (discussed further below) that (1) any enhancement of the Claimant's risk of contracting CGL required a far higher exposure that the Claimant sustained; (2) an enhancement of the Claimant's risk of contracting CGL required a different type of radiation exposure; and (3) the Claimant's age at exposure and latency periods were inconsistent with an inference of leukemia induced from his radiation exposure in the 1950's.

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Although unstated by either Dr. Rajdev or Mr. Manly, the Claimant seems to concur that the likelihood that radiation exposure will induce CGL is dependent upon three factors: the age of the person at the time of exposure, the length of the latency interval and the type and amount of the radiation dose (Claimant's Answering Brief on Appeal, at 23 [Appendix 2.1]. Thus, any well-reasoned opinion with respect to the causation issue concerning the Claimant's illness must address those three factors, as the Employer's witnesses did.

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Dr. Fabrikant's testimony was that the length of the latency interval (i.e., the

interval between radiation exposure and the diagnosis of CGL) for the Claimant was so long as to preclude the conclusion that his employment-related exposure was the cause of his CGL. (TR-IV, 174:3-6). Dr Fabrikant also noted that all the dose response trends for CGL "preclude" any data that CGL occurs at doses in the range of 1 to 3 rem. (TR-IV, 7:19).

Dr. Auxier reached the same conclusion of lack of causation herein based upon the lack of statistical evidence that exposure to as little as 6.3 rem of radiation[6] (let alone 2 to 3 rem) could result in an enhanced rate of leukemia. (TR-III, 247:24-248:4). He noted that the standard for permissible radiation exposure for a worker in the radiation industry was 5 rem per year, subject to the more general requirement that the dose must be kept as low as reasonably achievable. (TR-III, 339:1-5).[7]

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[6] 1.1 rem in 1954 and 5.2 rem in 1956, according to Mr. Manly.

[7] Over the three-year period between 1954 and 1956, the radiation to which the Claimant was exposed never exceeded 5 rem per year, even by Mr. Manly's erroneous calculations.

Dr. Moloney's conclusion, like Dr. Fabrikant's, was based upon the low dose of radiation received by the Claimant and the long period of time between the radiation exposure and the onset of Claimant's leukemia.

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Dr. Goldman joined in the conclusion that there was no causal link between the Claimant's employment-related exposure and to CGL. Dr. Goldman had three reasons: the latency was too long; the dose requires very high dose rates and doses that are efficiently induced. This was not the pattern to which Claimant was potentially exposed. (EX-19 at 1, Appendix 1.2). As Dr. Goldman's written testimony states, his analysis of the BEIR-V report on which Mr. Manly relies is that a relationship between the Claimant's illness and his employment-related radiation exposure is "extremely unlikely," because of the 33 years that elapsed between the time of the Claimant's last employment-related radiation exposure and the diagnosis of his leukemia:

> A careful analysis of increased granulocytic leukemia incidents in

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> irradiated persons has shown a clear pattern between time after exposure and risk. The radiation risk rises after a "silent" two-year latent period following exposure to a peak some three to six years later, and then rapidly "fades" after about 10-15 years approaching "natural" levels by about 15-20 years after exposure.

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Dr. Goldman continued that, in this case, any incremental leukemia risk that may initially have resulted form his occupational exposure has been almost zero after the 1970's. In light of his very low radiation dose and what Dr. Goldman described as an "exceedingly long" latency interval, Dr. Goldman concluded that it was highly improbable [8] that the Claimant's

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[8]It is not in the nature of science to reach absolute conclusions. Scientific knowledge is always evolving; scientific theories are nothing more than the explanations that best fit existing data, and are subject to perpetual revision. Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 591 (1993). P. Reidinger, "They

leukemia was due to his radiation doses in the Pacific during the mid-1950's. (EX-19 at 4).

Dr. Fry's opinion was based upon a review of the epidemiological data contained in 45 studies published in the scientific literature since the late 1970's. Those studies fall into three categories: (1) populations living in geographic areas of high natural background radiation or around nuclear installations; (2) populations in an area of fallout from nuclear explosions or tests; and (3) occupational activities in the nuclear industry or in a medical environment. After a detailed and balanced review of these studies, Dr. Fry concluded:

> In my opinion, based upon the currently available data, there is

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Blinded Me With Science," 82 A.B.A. Journal 58, 59 (1996). The term "highly improbable: does not mean impossible. However, it certainly means far less likely than not. Thus, it represents a scientist's conclusion that the Claimant's theory falls far short of the Claimant's burden of persuasion under the existing body of scientific knowledge as to the effects of radiation exposure on the induction of leukemia.

> no evidence of a causal association between chronic granulocytic leukemia in adults previously exposed to low-levels of radiation. (EX-22 at 15, Appendix 1.6).

As previously noted, Dr. Fry was highly qualified to reach a conclusion based upon the statistical data, since she was the head of the Health Mortality Study conducted for the United States Department of Energy by the Center for Epidemiologic Research of the Oak Ridge Associated Universities. That study was a long-term follow-up of 600,000 present and former contractor employees who had received occupational radiation exposure while employed at Department of Energy contractor facilities since 1947.

The only expert testimony on the causation issue-supporting Claimant came from Mr. Manly, the Claimant's witness, who is neither a physician nor an epidemiologist, and has never authored or conducted any studies concerning the health effects of ionizing radiation. Mr. Manly's curriculum vitae reflects no

academic or professional credentials that might qualify him to evaluate an interpret epidemiologic studies concerning radiation exposure, or make medical judgments.[9]

Although Mr. Manly's written reports were admitted into evidence (CX-11, Appendix 2.5 and CX-13, Appendix 2.6), his method of analysis of the pertinent causation variables is not disclosed in detail, and comprises only one page of his reports. Mr. Manly's report includes a lengthy discussion of the basis for his estimation of the Claimant's radiation dose, but it does not specifically address the

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[9] There is a growing tendency to exclude such "expert" testimony from the courtroom. Concern over this problem led Judge Patrick G. Higginbotham, to write: "It has become all to common for "experts" or "studies" on the fringes of or even well beyond the outer parameter of mainstream scientific or medical views to be presented to juries as valid evidence from which conclusions can be drawn. The use of such invalid scientific evidence (commonly referred to as "junk science") has resulted in findings of causation which simply cannot be justified or understood from the standpoint of the current state of credible scientific and medical knowledge." **Brock v. Merrell-Dow Pharmaceuticals**, 884 F.2d 167 (5th Cir. 1989), **cert. denied**, 494 U.S. 1046, 110 S. Ct. 1511 (1990).

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significance of the variables concerning the Claimant's latency period or the calculation of the latency period. Mr. Manly's analysis also does not specifically address the question of a threshold level below, which there is no evidence of a causal link between radiation exposure and enhanced risks of CGL. On the contrary, it heavily relies on the BEIR-V study, despite Mr. Manly's own observation that the population involved in this study (Japanese atomic bomb survivors) "was generally exposed to higher levels of radiation over a short period of time." (CX-11 at 9, Appendix 2.5).

Mr. Manly's report also seems to rely upon the NRRW study (attachment R-2, CX-11, Appendix 2.5), although this study notes in its conclusion:

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> There is evidence for an association between radiation exposure and mortality from cancer, in particular leukemia [sic] ... although mortality from these diseases in the study population overall

**was below that in the General population.**[10] [Emphasis added].

Two of Employer's epidemiology experts, Dr. Fabrikant and Dr. Fry, were familiar with and commented on this study, but found it unsupportive of the Claimant's contention that his leukemia was the result of his employment-related exposure. Notably, the NRRW study did not consider the importance of the distinctions which Employer's experts uniformly testified are necessary (and which the BEIR-V table included) for the worker's age at the time of exposure and latency period before the diagnosis of the disease,[11] and the NRRW study included very few (i.e., ten) cases of CGL patients. Mr. Manly's reliance upon the NRRW study also fails to address the

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[10] The NRRW study is attached in Appendix 3.2.

[11] In the copy of the BEIR-V report attached to Mr. Manly's report, the data for leukemia mortality occurring after a latency period of 26 to 30 years showed nearly five times the excess relative risk compared to the data for a latency period of 31 or more years. (SEE Table 4F-1, Exhibit CX-11, Attachment Q-1).

significance of the comment in the NRRW study that

> [I]n a combined analysis of data on about 36,000 radiation workers with a collective dose of 1140 Sv in the United States, the central estimate of the trend in risk with dose was negative both for all malignant neoplasm and for leukemia. (CX-11 at R-5, Appendix 2.5).

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Mr. Manly makes two errors in his use of the BEIR-V report that is attached to CX-11, Appendix 2.5. The first error is his failure to understand how the latency period was calculated by the authors of that report. The second is his illogical inference from his own "probability of causation" calculation.

Mr. Manly's opinions are further faulted and rejected by this Administrative Law Judge as he incorrectly estimated Claimant's latency period as the record leads ineluctably to the conclusion that Claimant's latency period is at least thirty-three years and as much as thirty-five years.

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Even a latency period of twenty-six to thirty years, based upon Claimant's 1986 blood tests, cannot support a finding of causation a the medical-scientific community recognizes a latency period of up to fifteen years as being the outer limits of potential causation.

The principle that the latency period is measured by the date of a diagnosis mad physiologically or pathologically is "a convention in radiation epidemiology." (TR-VI, 112:5-14). Because Mr. Manly is unfamiliar with epidemiology, he was unfamiliar with how to compute the latency period, and he used the wrong latency period in applying the BEIR-V table to Claimant's case. Mr. Manly used the statistics applicable to latency periods of twenty-six to thirty years as a part of calculating the probability of causation. The effect of using the wrong latency period was to increase by a factor of "probability of causation" resulting from the application of the BEIR-V formula. When a 3-rem exposure is used, as Respondents suggest, the probability of causation drops from Mr. Manly's 4.0% to 0.8% when the proper latency period is used. This means that the probability that the Claimant's leukemia had some cause other than his radiation

From Employers Briefs p. # 35

exposure increased form Mr. Manly's 96% (i.e., 100% minus 4%), computed from the wrong latency period. Even if one used the higher radiation dosage hypothesized by Mr. Manly, i.e., 6.3 rem,[12]the use of the correct latency period increases the probability of no causal effect from 92.0% (i.e., 100% minus a probability-of-causation of 8.0%) to 98.3% (i.e., 100% minus a probability of causation of 1.7%).[13]

The assumptions underlying the theory of the Claimant's 4.5 rem unbadged exposure on the trip to "Mystery Island" are contradicted by the objective photographic and radiation badge evidence, the testimony about safety and transportation procedures, and common sense, in my judgment.

From Employers Briefs p. # 35

Of the 6.3 rem that Mr. Manly calculates as Claimant's employment-related radiation exposure, 71% (i.e., 4.5

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[12]CX-13, Appendix 2.6.

[13]The calculation uses the formula in Mr. Manly's report, CX-11, Attachment Q at 224: PC = excess relative risk / 1+ excess relative risk. Table 4F-1 is calculated in excess relative risk per 0.1 Sv. i.e., excess relative risk per 10 rem exposure. (CS-11 at 8).

rem) was allegedly sustained during a one-day trip to an island that Claimant could not identify. That trip occurred, according to Mr. Manly, early in June of 1956, on the first or second day after the Seminole weapons test. (CX-11, Appendix 2.5) Mr. Manly was apparently trying, without success, to find an island whose physical characteristics matched the imprecise description of the island given by the Claimant. The Claimant testified that there was a concrete structure on the island; there was no vegetation on the island (TR. I, 54:4-5), and that you could see no other island from the "Mystery Island" (TR. I, 55:2-4).

From Employers Briefs p. #35

By the time of trial, Mr. Manly concluded that the unidentified (i.e., "Mystery Island") was the island known as Clara or Kirunu. Mr. Manly's assumptions about the identity of the "Mystery Island" and the time of the visit were critical to his calculations of Claimant's radiation exposure. Because those assumptions were wrong, Mr. Manly's conclusions were wrong.

Mr. Manly's conclusion as to this 4.5 rem exposure is wrong for five reasons: (a) it is based on incorrect assumptions of fact concerning Clara's vegetation and

proximity to other islands that are contradicted by photographs in evidence; (b) it is based on speculations regarding the thermal and blast effects of nuclear weapons, geography and botany where Mr. Manly had neither personal knowledge nor relevant expertise; (c) it contradicts and leaves unexplained the radiation measured by Claimant's badges for this period in June of 1956; (d) it was inconsistent with safety, transportation and measuring procedures during these tests; and (e) there was no logic or purpose to the assumed trip.

From Employers Briefs p. # 36

In each of his reports introduced into evidence (EX-30, Appendix 2.4 and CX-11, Appendix 2.5), Mr. Manly has stated that, in June 1956, Claimant accompanied a group of scientists on a small-motorized vessel known as a T-boat to an unknown island where he sustained radiation exposure while unbadged. By the time of the hearing, Mr. Manly had reversed his earlier assumption about the identity of this island and concluded that this "Mystery Island" was the island know as Clara, an island in close proximity to the site of the Seminole test explosion, and one that he assumed to be contaminated by that explosion.

From Employers Briefs p. # 36

Mr. Manly's conclusion that the "Mystery Island" was Clara is pure speculation, far removed from any scientific or specialized knowledge, which he may have. Mr. Manly had stated in his earlier submissions that he had assumed the "Mystery Island" was some other island, either Percy or Edna, not Clara. (Tr. I, 226:7-13). However, after reviewing a book entitled **"The Radiological Cleanup of Enewetok Atoll"**, he changed his choice to Clara on the reasoning that Clara was the only island that listed in its inventory a single concrete bunker. (TR. I, 226:7-22 and 227:25-228:5).

From Employers Briefs p. # 37

While it is true that Clara Island had a bunker, the very book on which Manly relied for this information[14] describes Clara as having dense vegetation in 1978. (Tr. II, 228:22). Mr. Manly, who had never visited Clara at any time, attempted to explain the apparent discrepancy concerning the absence of vegetation by assuming that Clara would have been denuded of vegetation in 1956 due to the effects of the heat and blast from a 1954 weapons test, test shot Nectar, two years

From Employers Briefs p. # 37

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[14]**I.E., The Radiological Cleanup of Enewetok Atoll.**

prior to the 1956 visit. He also assumed that, if denuding occurred in 1954, this denuding of Clara's vegetation would not have reversed itself in two years. (Tr. I, 230:15-17). Mr. Manly's qualifications to opine on the effect of the 1954 Nectar explosion on Clara's vegetation, and the rate of vegetative regrowth on Clara Island in the two following years were, quite simply, non-existent. Indeed, he concedes the point: "now, I'm not an expert in the effect of nuclear weapons." (Tr. I, 230:1-2). His credentials as a botanist or horticulturist are equally lacking from his curriculum vitae.

Finally, the testimony of Mr. Taft and Colonel Jacks dispels any possibility that the Claimant could have accompanied a group of radiation survey technicians to Clara on the fist or second day after the Seminole test. Mr. Taft testified that no expeditions were allowed, scientific or otherwise, by air or water where no radiological survey had been performed. (Id.) Any entry into a radex area required a prior survey, and a survey by boat would have required signing up for transportation through the marine department. (Id., 374:5-9) However, no survey readings were taken on Clara following the Seminole shot, as

From Employers Briefs p. # 40

reflected on Attachment N-2 of Mr. Manly's report. (CX-11, Appendix 2.5). Mr. Manly has no explanation why no data is reported from the purported survey by the group of scientists who visited the "Mystery Island" with Claimant and supposedly took readings of radiation levels. (Tr. II, 246:1-247:4).

Colonel Jacks testified as to how radiation surveys were performed following detonations. These surveys were done by helicopter, and not by T-boat, because a survey by T-boat "would take us forever." (Tr. III, 147:2-13). Mr. Manly's hypothesis that the claimant's trip by T-boat was a survey trip to Clara Island with a radex team is therefore inconsistent not only with the physical characteristics of Clara but also with direct evidence about how post-detonation radiological surveys were done, and with the simple reality that transportation by boat was too slow when data had to be gathered.

From Employers Briefs p. #40

Accordingly, I find and conclude that the overwhelming weight of the evidence establishes that Mr. Manly's assumptions concerning the identity of the "Mystery Island" and the visit to it on the day after the Seminole test were erroneous

and wholly unsupported. Clara does not fit the physical description give by Claimant, as documented by photographs taken in 1955. It would have been impossible for anyone to get approval to go to Clara on the first or second day of the Seminole test, as noted by the testimony of Robert Taft and Colonel Jacks. Entry into a radex area was strictly controlled and required advanced approval. If such approval had been requested, a radiological survey of the area intended to be visited would have been performed, and this record reflects that it was not done. Because radiological surveys following a weapons test were done by helicopter (in order to be timely), the hypothesis that Claimant (a cook) was sent on a data gathering mission by T-boat shortly after a weapons test is illogical and defies test safety procedures. Furthermore, Colonel Jacks testified that there were no scientific stations on Clara which might require a visit by scientists to go to Clara after the Seminole test, and less reason to send a cook along with the scientists.

From Employers Briefs p. 47

The final flaw in Mr. Manly's Clara-Island hypothesis is that it fails to explain the recorded exposure on the Claimant's radiation badge that occurred during the time frame from June 2, 1956 through June

9, 1956. This badge reflects a recorded exposure of 0.130 rem for that period. (Tr. III, 282:10-24). The trip to the "Mystery Island" was the Claimant's only departure from his usual workstation on Parry Island during the pertinent interval. Mr. Manly concedes that there was no contamination level on Parry Island during the pertinent period. (Tr. II, 155:2-7).[15] Claimant testified that the only time he left Parry Island between 6/2 and 6/9/56 was for this single trip to the "Mystery Island." (Tr. I, 44:1-15; 57:15-58:1).

From Employers Briefs p. # 42

Moreover, since Claimant's badge <u>does</u> reflect 0.130 rem exposure during the period June 2, 1956 through June 9, 1956, and since he only left Perry Island for a single trip (i.e., to "Mystery Island"), the most reasonable conclusion is that he sustained the 0.130 rem of exposure on a "Mystery Island" that was not Clara, and that he did not sustain the 4.5 rem exposure claimed by Mr. Manly at any time.

From Employers Briefs p. # 42

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[15]Mr. Manly's source documents confirm that fact. Attachment N-2 to CX-11 shows zero contamination reading on Parry Island on H+1 H+3, D+1 and D+2 after the Seminole test.

Because the groundless assumption about Clara Island exposure was crucial to Mr. Manly's estimation of 71% of the radiation exposure of the Claimant, Mr. Manly's conclusions as to the effect of that exposure on the Claimant's health lacked a basis that could be reasonably relied upon by Mr. Manly. Therefore, they comprise no scientific evidence at all, and that opinion is rejected by this Administrative Law Judge.

From Employers Briefs p. # 43

This fact-finder may reject as unreliable any inference of causation based solely upon epidemiologic studies showing an enhanced relative risk from exposure to a potentially toxic agent, unless those studies meet three criteria: (1) the relative risk established by the study is at least twice the baseline rate of the illness; (2) the findings of the study are statistically significant at the 95% confidence level, or higher; and (3) the confidence interval surrounding the calculated relative risk of exposure does not include the number one, i.e., the baseline rate of the illness among an unexposed group. Mr. Manly's conclusions failed all three of these requirements, any one of which is a fatal defect.

From Employers Briefs p. # 44

I also reject as illogic Mr. Manly's conclusion that the Claimant's employment-

related radiation exposure was more likely than not the cause of his CGL, since Mr. Manly's own calculations and assumptions reflect a probability of causation well below the 50%level, i.e., the level where such a conclusion would be equally as probable as not.

Decisional law has addressed the same concept using slightly different terminology. Under case law ranging from swine flu claims[16] to IUD claims,[17] colon cancer claims,[18] asbestos claims[19] and Agent Orange claims,[20] courts have announced

From Employers Briefs p. #

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[16]**Padget v. United States**, 553 F. Supp. 794 (W.D. Tex 1982); **Gaul v. United States**, 582 F. Supp. 1087 (D. Del. 1984).

[17]**Marder v. G.D. Searle & Co.**, 630 F. Supp. 1087 (D. Md. 1986).

[18]**In re Joint Eastern & Southern District Asbestos Litigation**, 758 F. Supp. 199 (S.D.N.Y. 1991).

[19]**In re Joint Eastern & Southern District Asbestos Litigation**, 827 F. Supp. 1014, 1028 (S.D.N.Y. 1993).

[20]**In re Agent Orange Product Liability Litigation**, 597 F. Supp740, 785 (E.D.N.Y. 1984).

that liability cannot be predicated solely on epidemiologic data showing an increased relative risk for exposed groups compared to unexposed groups unless the risk for exposed groups is at least double that for unexposed groups. This viewpoint is endorsed by scholarly commentary:

> In no case, however, can suffice to establish a causal link if it does not include at least reasonable estimates of exposure levels and durations, and data reasonably indicate a relative risk greater than 2. B. Black and D. Lilienfeld, Epidemiologic Proof in Toxic Tort Litigation, 52 Fordham L. Rev. 732, 769 (1984) (hereafter, "Epidemiologic Proof").

From Employers Briefs p. # 45

Mr. Manly's calculation is that the relative risk for Claimant, based on an assumed dose of 6.3 rem, was anywhere from 1.02 to 1.40 times the risk for unexposed groups. CX-13, Appendix 2.6.[21]

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[21]This comes form increasing the baseline risk rate of 1.0 by the excess relative rate

This is well short of the 2.0 times needed under the case law.

Courts commonly require that purely statistical data can be considered only when the results are statistically significant at the 95% confidence level or higher.[22] This does not mean that there is a 95% probability that the conclusions of the study are correct. It means only that there is less than a 5% chance (i.e., 100% minus 95%) that the observed difference between the disease rate of the control or unexposed group and that of the experimental or exposed group was merely the result of random variance between the two groups, rather than the effect of the item or toxin being studied (or some other factor that is co-variant with that item). **Epidemiologic Proof** at 757, n.104.

From Employers Briefs p. #

Mr. Manly, for unexplained reasons, chose to use only the 90% confidence level. (CX-13, Appendix 2.6; Cx-

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shown on Mr. Manly's analysis of the BEIR-V study: .02-0.40.

[22]**Moultrie v. Vartin,** 690 F.2d 1078 (4th Cir. 1982); **Whelan v. Merrell Dow Pharmaceuticals, Inc.,** 117 F.R.D. 299, 304 (D.D.C. 1987).

11 at 9, a\appendix 2.5.) This substantially diminished the reliability of the conclusions, since finding at the 90% confidence level is twice as likely to be merely the result of random variance between groups (i.e., 10% odds of a purely random variance) as a finding at the 95% confidence level (5% odds).

From Employers Briefs p. # 47

A related issue is the question whether the pertinent portion of the epidemiologic evidence is statistically significant at all. This question requires an understanding that the findings of an epidemiologic study based on a sample of those affected never support a single conclusion as to the relative risk of illness form exposure to the substance being studied, but instead only establish a "confidence interval" within which that relative risk probably lies. If that confidence interval includes the baseline disease rate for unexposed groups (i.e., includes a relative risk of 1), then the epidemiological data is insufficient to support an inference of causation from exposure.[23]

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[23]**Brock v. Merrell Dow Pharmaceuticals, Inc.**, 874 F.2d 307, 312 (5th Cir. 1989) (relative risk of 1.49 insufficient where confidence interval included relative risk of 1.0).

Mr. Manly's analysis excludes any reference to confidence intervals. However, he relies upon an NRRW study that showed that the number of cases of CGL sustained in the 2-5 rem (i.e., 20-50 MSV)[24] group radiation-exposed-workers in the sample was slightly lower (i.e., 10 cases) than was expected from an unexposed group of similar size (slightly more than all expected cases [6.57 + 4.56]). CX-11, Table VII, attachment R at 5, Appendix 2.5. This was part of the data that led the study's authors to conclude that

From Employers Briefs p. # 27

> There is strong evidence of a healthy worker effect. Mortality is lower in radiation workers than in the general population of England and Wales - Overall and for most specific causes, including cancers. Id. at 5.

From Employers Briefs p. # 28

This does not mean that low levels of radiation reduce the risk of contracting

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[24]A. Sievert is one-hundredth of a rem. 1 rem = 10 mSievert.

CGL. However, it certainly does not demonstrate that, at the low levels of radiation involved in this case, there is statistically significant evidence of an increased risk of CGL, nor that CGL can be causally linked to radiation exposure sustained more than thirty years before the disease was diagnosed.

From Employers Briefs p. # 48

In summary, I find and conclude that Mr. Manly's analysis failed to conform to the requirements of the trained epidemiologist or of the courts using epidemiologic evidence. His opinions on exposure and causation went well outside any expertise he may have claimed in the physics of radiation. They were demonstrably wrong both as to the calculation of the radiation exposure, and as to the soundness of inferences about the effects of that exposure on the Claimant.

The clear weight of both the expert qualifications and the soundness of scientific reasoning favored the Employer on the dose calculation and causation issues. Claimant's case simply did not fit the profile of someone whose illness was caused by radiation exposure.

From Employers Briefs p. # 48

Accordingly, I find and conclude that Claimant is not entitled to an award of benefits, as he has not established that his CGL constitutes a work-related injury.

**ENTITLEMENT**

Since Claimant has not established a work-related injury, he is not entitled to benefits in this proceeding and his claim for benefits is hereby **DENIED**.

The rule that all doubts must be resolved in Claimant's favor does not require that this Administrative Law Judge always find for Claimant when there is a dispute or conflict in the testimony. It merely means that, if doubt about the proper resolution of conflicts remains in the Administrative Law Judge's mind, these doubts should be resolved in Claimant's favor. **Hodgson v. Kaiser Steel Corporation**, 11 BRBS 42- (1979). Furthermore, the mere existence of conflicting evidence does not, **ipso facto**, entitle a Claimant to a finding in his favor. **Lobin v. Early-Massman**, 11 BRBS 359 (1979).

While Claimant correctly asserts that all doubtful fact questions are to be

resolved in favor of the injured employee, the mere presence of conflicting evidence does not require a conclusion that there are doubts, which must be resolved in Claimant's favor. **See Hislop v. Marine Terminals Corp.**, 14 BRBS 927 (1982). Rather, before applying the "true doubt" rule, the Benefits Review Board has held that this Administrative Law Judge should attempt to evaluate the conflicting evidence. **See Betz v. Arthur Snowden Co.**, 14 BRBS 805 (1981). Moreover, the U.S. Supreme Court has rejected the "true doubt" rule in **Maher Terminals, Inc. v. Director, OWCP**, 512 U.S. 267, 114 S.Ct. 2251, 28 BRBS 43 (CRT) (1994), **aff'g** 992 F.2d 1277, 27 BRBS 1 (CRT) (3d Cir. 1993).

As Claimant has not successfully prosecuted this claim, his attorney is not entitled to a fee award.

## ORDER

It is therefore **ORDERED** that the claim for compensation benefits filed by Calvin T. Kaneshiro is hereby **DENIED**.

s/_____
DAVID W. DI NARDI
Administrative Law Judge

Dated: JAN 3 1997

Boston, Massachusetts

DWD:ln

# APPENDIX エ

U.S. Department of Labor
Benefits Review Board
800 K. Street N.W.
Washington, D.C.
2001-8001

**BRB No. 93-1370**

Calvin T. Kaneshiro

Claimant-Respondent

v.

**DATE ISSUED:**
**MAR 18 1996**

Holmes & Narver Inc.

and

**DECISION**
**and ORDER**

WASAU Insurance Company

Employer/Carrier-
Petitioners

Appeal of the Decision and Order Awarding Benefits of G. Marvin Bober, Administrative Law Judge, United States Department of Labor.

Ronald P. Tongg (Tongg and Tongg), Honolulu, Hawaii, for claimant.

James N. Duca and Robert C. Kessner (Kessner Duca Umebayashi Bain & Matsunaga), Honolulu, Hawaii, and B. James Finnegan (Finnegan & Marks), San Francisco, California, for employer/carrier.

Before: HALL, Chief Administrative Appeals Judge, SMITH and DOLDER, Administrative Appeals Judges.

**PER CURIAM:**

Employer appeals the Decision and Order Awarding Benefits (91-LHC-2518) of Administrative Law Judge C. Martin Bober rendered on a claim filed pursuant to the provisions of the Longshore and Harbor Workers' Compensation Act, as amended, 33 U.S.C. §901, as extended by the Defense Base Act, 42 U.S.C. §1651 et seq. (the Act). We must affirm the findings of fact and conclusions of law of the administrative law judge, which are rational, supported by substantial evidence, and in accordance

with law. *O'Keeffe v. Smith, Hinchman & Grylls Associates, Inc.*, 380 U.S. 359 (1965; 33 U.S.C. §921(b)(3).

Claimant was employed by employer as a waiter/cook on the Enewetok an Bikini Atolls from January 20, 1954, to January 19, 1955, from February 16, 1955, to November 15, 1955, and from December 16, 1955, to June 11, 1956, during which time those atolls were being utilized by the Atomic Energy Commission and Joint Chiefs of Staff in connection with the United States' atomic weapons testing program. In January 1989, claimant was diagnosed with chronic granulocytic leukemia (CGL). Claimant thereafter sought total disability benefits under the Act, alleging that his exposure to radiation during the course of his employment with employer resulted in his CGL.

In his Decision and Order, the administrative law judge found, *inter alia*, that, as claimant established his *prima facie* case based upon his exposure to radiation and the diagnosis of CGL, claimant is entitled to the presumption of causation at 33 U.S.C. §920(a), and that employer had failed to rebut that presumption.

Accordingly, the administrative law judge awarded claimant temporary total disability compensation commencing January 17, 1989, and continuing, interest on any accrued unpaid compensation benefits, penalties under Section 14(e), 33 U.S.C. §914(e), for the period from January 17, 1989, to December 8, 1989 and medical benefits.

On appeal, employer challenges the administrative law judge's findings regarding the existence of working conditions, which could have caused claimant's CGL. Alternatively, employer contends that the administrative law judge erred in determining that it failed to rebut the Section 20(a) presumption with regard to causation. Claimant responds, urging affirmance of the administrative law judge's decision.[1]

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[1] The Board denied claimant's request to expedite this appeal by Order dated August 30, 1995. We note that in seeking expedited review claimant asserted as a basis payments due on loans taken to pay fees and costs, including those of his expert witness in this case. However, no attorney's fees or costs payable by claimant were awarded by the administrative law judge. *See* 33 U.S.C. §928©. Rather, all fees

Employer initially contends that the administrative law judge erred in invoking Section 20 (a), asserting that he erred in fining that claimant established the existence of working conditions which could have caused his CGL. We reject this contention. Claimant must establish a *prima facie* case in order to invoke Section 20(a). Claimant bears the burden of proving that he sustained an injury or harm, and that working conditions existed that could have caused the injury or harm, in order to

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and costs awarded by the administrative law judge were assessed against employer. *See* 33 U.S.C. §928(b). Since an award of an attorney's fee does not become effective and is thus not enforceable until all appeals are exhausted, *see Wells v. International Great lakes Shipping Co.*, F.2d 663, 15 BRBS 47 (CRT)(7th Cir. 1983); *Williams v. Halter Marine Service, Inc.*, 19 BRBS 248 (1987), this fee order is not subject to enforcement during the pendency of employer's appeal. *See Thompson v. Potashnik Construction Co.*, 821 F.2d 574 (9th Cir. 1987). Accordingly, as counsel's fees and costs of litigations, including expert witness fees, if any are ultimately due after remand, are payable by employer, any attempt to obtain payment of any fees or costs from claimant is a violation of the Act. 33 U.S.C. §928(e).

demonstrate a prima facie case. *See Konno v. Yong Bros., Ltd.*, 28 BRBS 57 (1994; *Volpe v. Northeast Marine Terminals*, 14 BRBS 17 (1981), *rev'd on other grounds*, 671 F.2d 697, 14 BRBS 538 (2d Cir. 1982). In establishing his *prima facie* case, claimant is not required to introduce affirmative medical evidence establishing that the working conditions in fact caused the harm; rather, claimant must only show the existence of working conditions, which could conceivably cause the harm alleged. *See Sinclair v. United Food and Commercial Workers*, 23 BRBS 148 (1989).

In the instant case, it is uncontroverted that claimant suffers from CGL; claimant, therefore, has established a harm. Moreover, it is undisputed that claimant was exposed to radiation while employed by employer. Employer, however, contends that, although claimant had been exposed to at least 1.13 rem of radiation during his employment, this level of exposure was insufficient to cause his CGL.[2] The administrative law judge determined that, even if employer's

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[2]Claimant asserts that he was exposed to approximately 6.3 rems of radiation during his employment with employer.

estimated exposure figure were accurate, such an exposure constituted working conditions, which could have caused claimant's condition. As noted above, claimant is not required to introduce medical evidence establishing that the conditions to which he was exposed in fact caused his harm in order to invoke the Section 20(a) presumption. *See U.S. Industries/Federal Sheet Metal, Inc. v. Director, OWCP*, 455 U.S. 608, 14 BRBS 631 (1982). In this case, it is undisputed that claimant sustained some degree of radiation exposure. The administrative law judge also relied on evidence indicating a relationship between radiation exposure and CGL. Based on these facts, the administrative law judge did not err in finding claimant established the working conditions element of his *prima facie* case. Thus, we affirm the administrative law judge's invocation of the Section 20(a) presumption. *See Sinclair*, 23 BRBS at 148.

Employer next challenges the administrative law judge's finding that claimant's medical condition is related to his employment with employer. Specifically, employer alleges that the administrative law judge erred in

determining that it failed to rebut the Section 20(a) presumption. Once the Section 20(a) presumption is invoked, the burden shifts to employer to rebut the presumption with substantial evidence that claimant's condition was not caused or aggravated by his employment. *Sam v. Loffland Brothers Co.*, 19 BRBS 228 (1987). It is employer's burden on rebuttal to present specific and comprehensive evidence sufficient to sever the causal connection between the injury and the employment. *See Peterson v. General Dynamics Corp.*, 25 BRBS 71 (1991), *aff'd sub nom. Ins. Co. of North America v. U.S. Dept of Labor*, 969 F.2d 1400, 26 BRBS 14 (CRT)(2d Cir. 1992), *cert. Denied*, 113 S. Ct. 1253 (1993); *see also Swinton v. J. Frank Kelly, Inc.*, 554 F.2d 1075, 4 BRBS 466 (D.C. Cir.), *cert denied*, 429 U.S. 820 (1976). In establishing rebuttal of the presumption, proof of another agency of causation is not necessary. *See Stevens v. Todd Pacific Shipyards*, 14 BRBS 626 (1982)(Kalaris, J., concurring and dissenting), *aff'd mem.*, 722 F.2d 747 (9th Cir. 1983), *cert. denied* 467 U.S. 1243 (1984). Rather, the unequivocal testimony of a physician that no relationship exists between an injury and a claimant's employment is sufficient to rebut the

presumption. *See Kier v. Bethlehem Steel Corp.*, 16 BRBS 128 (1984). If the administrative law judge finds that the Section 20(a) presumption is rebutted, he must weigh all of the evidence and resolve that causation issue based on the record as a whole. *See Avondale Shipyards. Inc. v. Kennel*, 914 F.2d 88 24 BRBS 46 (CRT)(5th Cir. 1990); Devine v. Atlantic Container Lines, G.I.E., 23 BRBS 270 (1990).

Employer, in contending that the administrative law judge erred in finding that it did not establish rebuttal, specifically challenges that the administrative law judge's credibility determinations and the administrative law judge's failure to address all of the medical evidence of record regarding the lack of a causal relationship between claimant's medical condition and his employment with employer. In the present case, the administrative law judge determined that the opinions of Drs. Goldman and Fabrikant were insufficient to establish rebuttal. Dr. Goldman concluded that there was a 99.5 percent chance that claimant's leukemia was caused by agents other than his radiation exposure. CX 6 at 4. Dr. Fabrikant stated that claimant's exposure

between 1954 and 1956 did not cause his leukemia, Tr. IV at 171-172, and that the medical evidence precluded any causation between the exposure and the illness. Tr. IV at 177.

In reaching his conclusion that this evidence was not sufficient to establish rebuttal, the administrative law judge addressed the underlying studies supporting the conclusions of Drs. Goldman and Fabrikant but did not discuss the doctors, conclusions themselves. *See* Decision and Order at 12-14. The administrative law judge found the probability calculations developed by the Advisory Committee on Biological Effects of Ionizing Radiation (*i.e.*, BEIR V Table, CX 11, Attachment Q), utilized by Drs. Goldman and Fabrikant in rendering their opinions, unpersuasive and, therefore, insufficient to support the physicians' conclusions. However, a medical opinion may not be rejected solely because it is unsupported by a definitive scientific study; rather, a medical opinion may be sufficient to rebut the presumption if it rules out a causal relationship between claimant's harm and a working condition. *See Neeley v. Newport News Shipbuilding & Dry Dock Co.*,

19 BRBS 138 (1986). Accordingly, we vacate the administrative law judge's finding that employer failed to establish rebuttal of the Section 20(a) presumption based on the opinions of Drs. Goldman and Fabrikant.

In addition, our review of the record reveals medical testimony not addressed by the administrative law judge, which, if credited by the administrative law judge, is sufficient to establish rebuttal of the Section 20(a) presumption. Specifically, Dr. Fry concluded that there was no evidence of a causal association between claimant's CGL and his exposure to radiation. EX 22 at 15. Similarly, Dr. Moloney opined that a radiation-induced etiology for claimant's condition was unacceptable. EX 27 at 3. Therefore, the case must be remanded for reconsideration of the issue of causation. On remand, the administrative law judge must address all of the medical evidence of record, including the opinions of Drs. Goldman, Fabrikant, Fry and Moloney, when determining whether employer established rebuttal of the Section 20(a) presumption. If Section 20(a) is rebutted, the administrative law judge must weight the evidence in the record as a whole and render a decision

supported by substantial evidence.[3] *See generally Director, OWCP v. Greenwich Collieries*, 114 S. Ct. 2251, 28 BRBS 43 (CRT) (1994).

Accordingly, the administrative law judge's determination to invoke the Section 20(a) presumption is affirmed. His Decision and Order Awarding Benefits, however, is vacated, and the case is remanded for further consideration consistent with this opinion.

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[3] In addressing the medical evidence of record, employer contends that Philip Manly, claimant's radiation expert, is unqualified to evaluate any medical evidence of record with respect to the causes of claimant's leukemia since Mr. Manly is neither a physician, biophysicist, or pathologist. Similarly, employer challenges the testimony of Dr. Rajdev, noting that the physician is not a radiation physicist. As employer implies, the administrative law judge on remand must set forth the qualifications of each witness when discussing the voluminous medical evidence of record; contrary to employer's assertion, however, the administrative law judge, after considering those qualifications, may accept or reject the testimony of any witness so long as he provides a rational basis for his decision.

SO ORDERED

s/_____
BETTY JEAN HALL,
Chief Administrative Appeals Judge

s/_____
ROY P. SMITH,
Administrative Appeals Judge

s/_____
NANCY S. DOLDER,
Administrative Appeals Judge

## CERTIFICATE OF SERVICE

93-1370 Calvin T. Kaneshiro v. Holmes & Narver, Inc., Wausau Insurance Companies, Director, Office of Worker's Compensation Programs (Case No. 91-LHCA-2518)(OWCP No. 15-0032725)

I certify that the parties below were served on this day.

MAR 18 1996 (DATE)

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APPENDIX J

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In the Matter of
CALVIN T. KANESHIRO
Claimant

Case No. 91-LHC-2518

against

OWCP No. 15-32725

HOLMES & NARVER, INC.,
Employer

and

WASAU INSURANCE COMPANIES,
Carrier

and

DIRECTOR, OFFICE OF WORKERS'
COMPENSATION PROGRAMS
Party-In-Interest

RONALD P. TONGG, ESQ.
For the Claimant
ROBERT C. KESSNER, ESQ.
B. JAMES FINNEGAN, ESQ.
For the Respondents

BEFORE: G. MARVIN BOBER
Administrative Law Judge

## DECISION AND ORDER AWARDING BENEFITS

This proceeding arises from a claim for disability benefits filed by Calvin T. Kaneshiro (herein "Claimant") against Holmes and Narver, Inc. (herein "Employer") and Wausau Insurance Companies (herein "Carrier") under the Longshore and Harbor Workers' Compensation Act, 33 U.S.C. Section 901 et seq. (herein "Act") as extended by the Defense Base Act.

Herein, "EX" shall refer to Employer's exhibits, "CX" shall refer to Claimant's exhibits and "ALJX" shall refer to Administrative Law Judge exhibits.

A formal hearing was held in Honolulu, Hawaii on May 8 and 11-14, 1992, at which all parties were afforded full opportunity to present evidence and argument as provided in the Act. Both parties have submitted post-hearing briefs. Post-hearing EX 127 (Dr. Jacob I. Fabrikant's report entitled "the Accident At Three Mile

Island Resulted In Negligible Levels of Radiation Exposure of the Public") has been admitted into evidence.

On July 17, 1989, Claimant, Calvin T. Kaneshiro, filed an Employee's Claim for Compensation with the United States Department of Labor, Employment Standards Administration, Office of Workers' Compensation Programs. (CX-1) Claimant alleges that he suffers chronic granulocytic leukemia (hereinafter referred to as CGL) [1/] as a result of his employment with Employer Holmes & Narver, Inc. It is Claimant's contention that he was exposed to ionizing radiation as a result of atomic weapons testing in the Pacific Proving Grounds where Claimant worked for Employer from 1954 to 1956 as a waiter/cook in a support personnel capacity. Employer was a civilian contractor providing support personnel to the Atomic Energy Commission and Joint Chiefs of Staff in connection with the atomic weapons testing program being conducted by the United States of America. Claimant alleges this exposure caused him to develop this cancer, which was diagnosed in

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1/ This is also known as myeloid leukemia or myelogenous leukemia.

January 1989. (EX-12, 31) [See attached appendices for a history of the Pacific Proving Grounds and pertinent Marshall Island maps.]

The outstanding issues in this matter are as follows: (1) Whether Claimant gave timely notice of injury as required by Section 12 of the Act; (2) Whether Claimant filed a timely claim as required by Section 13 of the Act; (3) Whether Claimant suffered and injury which arose out of and in the scope of his employment with Employer with related sub issues of (a) The extent of Claimant's exposure to radiation while working for Employer, and (b) Whether or not Claimant's CGL was caused by work-related radiation exposure; (4) attorney fees; (5) penalties; (6) interest.

The stipulated, or uncontroverted facts, are as follows: (1) The Act as extended by the Defense Base Act, applies to this claim; (2) Claimant and Employer were in an Employer/Employee relationship ant the time of the alleged radiation exposure; (30 Claimant worked for Employer in the Marshall Island form January 24, 1954 to January 19, 1955; form February 18, 1955 to November 15, 1955; and from December 17, 1955 to June 11, 1956; (4) Claimant suffers

from chronic granulocytic leukemia which was medically diagnosed in January 1989; (5) Employer received notice of Claimant's alleged injury on August 1, 1989; (6) Claimant filed a claim for compensation on July 19, 1989; (7) Employer its first report of accident on December 8, 1989; (8) Employer filed its notice of controversion on December 8, 1989; (9) Claimant was temporarily and totally disabled form January 1989 to present; (10) No medical benefits have been paid on behalf of Claimant by Employer under Section 7 of the act; (11) No disability payments are being paid to Claimant by Employer; (12) Claimant's average weekly wage for purposes of this claim is determined pursuant to Section 10 (d) (2) (B) if the Act and is agreed to be $318.12 as of January 1989; (13) Claimant has not had any employment since January 1989; (14) Claimant's alleged injury occurred while he was working with the employer as a cook in the Marshall Islands, specifically the Enewetak and Bikini Atolls, during the period of 1954 to 1956; (15) Claimant alleges he was exposed to radiation during his employment with the employer and that his exposure to radiation during his employment with the employer has caused him to suffer chronic granulocytic leukemia;

(16) Employer is headquartered in Orange County, California.

With respect to this particular ionized radiation exposure case, a few comments are warranted. I've been an administrative law judge for about 12 years, and this has been one of the most intellectually challenging cases I have ever to consider. It has had a depth of mathematical, scientific and medical testimony and data not found in the average case. There have been approximately 150 exhibits and a thousand pages of testimony, all requiring review and analysis.

In arriving at a decision in this matter, it is well settled that the fact-finder is entitled to determine the credibility of the witnesses, to weigh the evidence, and draw his own inferences from it, and his is not bound to accept the opinion or theory of any particular medical examiners. Todd Shipyards v. Donovan, 300 F.2d 741 (5th Cir. 1962); Atlantic Marine, Inc. and Hartford Accident & Indemnity Co. v. Bruce, 661 F2d 898, 900 (5th Cir. 1989); Bank v. Chicago Grain Trimmers Association, Inc., 390 U.S. 459, 467, reh'g denied, 391 U.S. 929 (1968). At the outset it further must be recognized

that all factual doubts must be resolved in favor of the claimant. Wheatley v. Adler, 407 F2d 307 (D.C. Cir. 1968); Strachan Shipping Co. v. Shea, 406 F.2d 521 (5th Cir.) cert. denied, 395 U.S. 921 (1969). Furthermore, it has been consistently held that the Act must be consured liberally in favor of the claimant. Voris v. Eikel, 346 U.S. 328, 333 (1953); 346 U.S. 328, 333 (1953); J.B. Vozzolo, Inc. v. Britton, 377 F.2d 144 (D.C. Cir. 1967).

The first issue to be addressed is whether or not Employer received timely notice of Claimant's injury in accordance with Section 12 of the Act. 33 U.S.C. 912. In occupational disease cases, notice of the occupation injury must be given to the employer within one year after the claimant became aware of the relationship between his employment, the disease and the disability. Section 12 of the Act. In their preheating submissions consul for Claimant and for Employer entered into certain stipulated facts including one, which reads, "That claimant suffers form CGL which was medically diagnosed in January of 1989." (Tr. Vol. I, p. 13) in fact, one of Employer's medical experts, Dr. Jacob I. Fabrikant

[2]/opined the he would establish the onset of Claimant's CGL in 1989. (Tr. Vol. IV, p. 111)

Based on the foregoing, it is undisputed that Claimant fist became aware that he suffered form CGL when it was medically diagnosed on January 17, 1989. His awareness of the relationship between his employment, his cancer and his disability, therefore, could not have preceded that date.

Additionally, it is noted that Employer received notice of Claimant's CGL on August 1, 1989, well within the one year time limit required by Section 12. It is further noted that Dr. Niranjani Rajdev's [3]/ suggestion that the disease had onset in

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[2]/ Dr. Fabrikant is a medical doctor board certified in diagnostic radiology, nuclear medicine and radiation oncology. Dr. Fabrikant also has a PhD. In biophysics, a combination of biological sciences and physical sciences in which precise physical measurements are made of the effects of various physical agents on biological mater. Radiation biophysics is a subdiscipline of biophysics.

[3]/ Dr. Rajdev is board certified in internal medicine and medical oncology.

1986 does not affect this finding of fact. Dr. Rajdev, Claimant's treating physician, was simply looking back in hindsight to a period when Claimant had an elevated white blood cell count. It was the bone marrow biopsy performed on January 17, 1989 which diagnosed CGL (EX 12, 31) Thereafter Claimant was referred for treatment to Dr. Rajdev who issued a report on June 20, 1989 addressing Claimant's diagnosis of CGL and his history of exposure to radiation on Enewetak Atoll and Bikini Atoll form 1954 through 1956 (EX 9, at p. 152).

The next issue to be addressed is whether or not Claimant filed his claim within the time limit set forth in Section 13 of the Act. 33 U.S.C. 913. A claim for compensation in the case of an occupational disease is timely if filed within two years after the employee became aware of the relationship between the employment, the disease and his disability. Section 13 of the Act. This time for filing does not commence until the employee is or should have reasonably been aware of the relationship between the injury and the employment.

As previously stated, the earliest Claimant could have become aware of the

possible relationship between his employment with Employer and CGL and his disability was in January of 1989. Since his claim was filed approximately seven months later on July 19, 1989, his claim was filed well within the two-year time limit set forth in Section 13 of the Act.

The third and most complicated issuer in this matter is whether or not Claimant's injury arose out of and in the scope of his employment with employer. Related sub issues are the extent of Claimant's exposure to radiation while working for Employer, and whether or not Claimant's CGL was caused by work-related radiation exposure.

Claimant has the burden of establishing a prima facie case of condensability. Specifically, Claimant must demonstrate a physical or mental impairment and prove some circumstance at work, which could have caused the alleged impairment. U.S. Industries/Federal Sheet Metal, Inc. v. Director, OWCP, United States Department of Labor, 455 U.S. 608, 616 (1982). Once Claimant establishes a prima facie case, Section 20(a) of the Act favors him or her with the presumption that the harm was

caused by the accident. Kelaita v. Triple A. Machine Shop, 13 BRBS 326 (1981). The section 20(a) presumption operates to link the harm with the injured employee's employment. Lacy v. Four Corners Pipe Line, 17 BRBS 139 (1985). Graham v. Newport News Shipbuilding and Dry Dock Co., 13 BRBS 336 (1982); Jones v. J.F. Shea Co., 14 BRBS 207 (1981); Darnell v. Bell Helicopter International, Inc., 16 BRBS 98 (1984). To establish the Section 20(a) presumption a Claimant need not introduce medical evidence establishing that the condition to which he was exposed in fact caused the disability. All that is required is a working condition, which could have caused it. Devane v. Atlantic Contianer Lines, 23 BRBS 279 (1990); Sinclair v. United Food Commercial Workers, 23 BRBS 148 (1990).

To qualify as a compensable injury under the Act, the injury must arise out of and in the course of employment. "Arising out of" and " in the course of" employment is separate elements requiring separate specific findings. The former refers to the source or cause of the injury. Mulvaney v. Bethlehem Steel Corp., 14 BRBS 593, 595 (1981). The latter refers to the time, place, and circumstances of the injury. United

States Indus./Fed. Sheet Metal, Inc. v. Director, OWCP, 455 U.S. 608 (1982), rev'g Riley. United States Indus./Fed. Sheet Metal, Inc., 627 F.2d 455 (D.C. Cir. 1980). Not only must the injury have been caused by the employment, it also must have arisen during the employment.

The Board has held that for an injury to be considered as "arising out of and in the curse of employment," the injury must be shown to have occurred within the time and space boundaries of the employment and in the course of an activity the purpose of which is related to the employment. Wilson v. Washington Metro Area Transit Auth., 16 BRBS 73 (1984).

In proving that an injury arose out of and in the course of employment, a claimant is aided by the presumption found at 33 U.S.C. §920(a), which provides that "it shall be presumed, in the absence of substantial evidence to the contrary, [t] hat the claim comes within the provisions of this chapter." The section 20(a) presumption applies equally to whether the injury arose in the course of employment. Mulvaney v. Bethlehem Steel Corp., 14 BRBS 593, 595 (1981); see also Forlong v. American Sec. & Trust Co., 21 BRBS 155, 161

(1988); Willis v. Titan Contractors, Inc., 20 BRBS 11 (1987); Pittman v. Jeffboat, Inc., 18 BRBS 212 (1986); McGuigan v. Washington Metro. Area Transit Auth., 10 BRBS 261, 263 (1979).

To be entitled to the Section 20(a) presumption, the claimant must show two elements: (1) that he sustained some physical harm, and (2) that a work-related accident occurred, or working conditions existed that could have caused the harm. United States Indus./Fed. Sheet Metal, Inc. v. Director, OWCP, 455 U.S. 608 (1982); Care v. Washington Metro. Area Transit Auth., 21 BRBS 248 (1988); Cairns v. Matson Terminals, Inc., 21 BRBS 252 (1988). Once these two elements are demonstrated, the claimant has established a prima facie case, and is entitled to the presumption that his injury was caused or aggravated by his employment. At this point, the burden of proof shifts to the employer to present substantial evidence that the claimant's injury was not related to his employment, thereby rebutting the presumption. Once such evidence is produced, the presumption disappears and the administrative law judge must examine the competing evidence as a whole. Swinton v. J. Frank Kelly, Inc., (In re District of Columbia

Workmen's Comp. Act), 554 F.2d 1075 (D.C. Cir.), cert. denied, 429 U.S. 820 (1976).

Although section 20(a) contains several presumptions, including the presumption of causality, there is no presumption that the claimant suffered an injury. Murphy v. SCA/Shayne Bros., 7 BRBS 309, 312 (1978). Rather, the burden is on the claimant to prove the existence of an injury. Id. at 312; Darnell v. Bell Helicopter Int'l, Inc., 16 BRBS 98 (1984). This type of injury means physical harm, or, as the Board has also described it, "something [gone] wrong within the human frame." Wheatley v. Adler, 407 F.2d 307, 313 (D.C. Cir. 1968). This physical harm injury is distinct form injury as defined by section 2(2), which provides that injury means "injury or death arising out of and in the course of employment." Kelaita v. Triple A Mach. Shop, 13 BRBS 326 (1981). The section 2(2) injury is a combination of the actual physical harm and its compensability due to the claimant's covered employment. Id. at 329-30.

Substantial evidence necessary to rebut the presumption has been defined as such relevant evidence as a reasonable mind might accept as adequate to support a

conclusion. Spraque v. Director OWCP, United States Department of Labor, 688 F.2d 862, 865 (1st Cir. 1982). More specifically, in order to overcome the presumption of compensability, the evidence must be specific and comprehensive enough to sever the potential connection between the liability and the work environment. Parsons Corp. v. Director, OWCP, United States Department of Labor, 619 F.2d 38, 41 (9th Cir. 1980).

In addressing this issue, it is appropriate at this time to briefly note Claimant's pertinent preliminary background information. Claimant was born on February 19, 1927. He was employed by Holmes & Narver as a water/cook during the periods of January 20, 1954 to January 19, 1955; February 16, 1955 to November 15, 1955 and December 16, 1955 to June 11, 1956. (Tr. Vol. I p. 16) During this time employment he was stationed on Parry Island in Enewetak Atoll and Fox Island in Bikini Atoll. He was provided a film badge dosimetry device to record and measure radiation exposure for at least some of the time.

In relation to the measurement of radiation, several terms have been used by various expert witnesses and throughout the evidence. The term "R" refers to a roentgen and technically is and exposure dose (a measure of how much ionization is caused in air as a result of the ionizing radiation). "RAD" is an acronym for radiation-absorbed dose. "RAD" deals with how much radiation is actually absorbed by a body or material, whether is a human body or some other material. (Tr. Vol. I p. 166)

Exposure is measured in terms of "rem". Rem refers to an acronym for roentgen equivalent man. A rem is a special unit of dose equivalent. The biological dose equivalent unit, the rem is equal to the absorbed dose (rad) times the modifying factors which take into account the different effectiveness of different types of radiation in biological systems. (Tr. Vol. I p. 166) A millirem (mrem) is one-thousandth of a rem. (Tr. Vol. I p. 184)

Other units of measurement are form the Systems International and referred to as "SI Units." (Tr. Vol. I p. 167) these include the "sievert" (the equivalent of 100

rem) and the "GRAY" (the equivalent of 100 RAD).[4/]

His recorded radiation exposure (dosimetry badge) form atomic bomb testing was 160 mrem (0.16 rem) in 1954, 30 mrem (0.03 rem) in 1955 and 940 mrem (0.94 rem) in 1956 for a total of 1,130 mrem (1.130 rem). In his spare time Claimant alleges that there were occasions during company-sponsored recreational outings such as diving, swimming and collecting shells when he was exposed to radiation as well. Also, during official assignments there were periods where he was not "badged" with a documentary film badge.

Claimant was diagnosed with CGL on January 17, 1989. A review of his medical records revels that on April 11, 1996, a routine blood test showed an elevated white blood count (EBC) of 16.7 thousand/cc, above the normal maximum level of 10.8 thousand/cc. Additionally, Claimant's doctor indicated that Claimant's WBC was as high as 19,000 in 1986. There were no records found that show the WBC

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[4/] A glossary of commonly used terms concerned with radiation is contained in part of EX 62.

returning to normal levels between 1986 and 1989, when CGL was diagnosed.

In the instant case, the record clearly establishes that claimant suffers form CGL that was medically "diagnosed by Dr. A.S. Woo, a pathologist, on January 17, 1989. (CX 6 p. 1; CX 9 pp. 135-136).

Additionally, the record establishes that while in the Marshall Islands these contract periods of employment, atmospheric atomic testing was conducted, specifically Operation Castle (March 1, 1954 -May 14, 1954) and Operation Redwing (May 5, 1956 - July 22, 1956). (EX 38) Also the record indicates that Claimant was exposed to radiation as a result of this testing. (CX 10, CX 11). The evidence also indicates that CGL is induced by ionizing radiation. (CX 6 p. 1; CX 14; Tr. Vol. II pp. 33-34). "When the entire body is in a penetrating x or gamma radiation field (such as during weapons testing) the critical organ is usually the bone marrow which is relatively sensitive to ionizing radiation and is the source of radigenic leukemia." (EX 62 p. 55) Therefore, it is found that Claimant has satisfied both requirements for invocation of the Section 20(a) presumption.

Accordingly, Claimant has established a prima facie case.

To rebut the Section 20(a) presumption, Employer needs to show that evidence exists which a "reasonable mind accepts as adequate to support a conclusion" of not causal relationship. John W. McGrath Corp. v. Hughes, 264 F.2d 314 (2nd Cir.), cert. denied, 360 U.S. 931 (1959).

One of Employer's experts, Dr. John A. Auxier, [5/] testified that in his opinion Claimant's radiation exposure was between two and three rem. (CX 13) Employer's other expert, Dr. Jacob I. Fabrikant, testified that no cases of CGL have been observed below exposures of 40 rem and 100 rem in connection with studies of the Japanese atomic bomb survivors of Hiroshima and Nagasaki, respectively. (Tr. Vol. IV, pp. 206 to 209) Through this testimony, Employer argues that Claimant's CGL is not causally related to his working environment.

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[5/] Dr. Auxier has a PhD in Health Physics and prior to beginning a private consulting business had been the director of the Health Physics Division at the Oak Ridge National Laboratory.

However, this argument is faulty on several grounds. First, as will be demonstrated, Claimant has provided evidence that he was exposed to more than 2 to 3 rem. At this point a discussion on the dose assessment of Claimant's exposure is in order.

Philip J. Manly, who holds a comprehensive certification in Health Physics form the American Board of Health Physics, prepared a dose assessment on Claimant's behalf. (This assessment underwent two revisions. See CX 11 & 13) It is noted that the Department of Veterans Affairs considers dose estimates to be from "credible sources" if prepared by persons certified in health physics, and if based on an analysis of the facts and circumstances of the particular case. 38 CFR 3.311b.

Dr. Manly assumed the onset of Claimant's CGL disease process to be 1986 for the probability of causation calculation. This assumption, which I find reasonable, in no way, conflicts with the diagnostic date of January 17, 1989. It merely shows that in hindsight, it was apparent that Claimant's disease process was at work in 1986. Claimant's physician, Dr. Rajdev, stated that, based on his years of experience,

Claimant's CGL was beginning to manifest at this time.

Dr. Rajdev explained the basis of his opinion. (Tr. Vol. II p. 38) First he noted that Claimant had an elevated white count of 16,700. The doctor acknowledged that this could be raised also by and infection but that a white cell counts that high indicates a fairly toxic, severe infection. Second, Claimant had four percent basophiles in his blood count. Basophiles are a type of white cell, which commonly has an elevated count when there is CGL. Four percent, according to the doctor, is a fairly high number. Third, there was a MCV of 103, which Dr. Rajdev state tells the size of red cells and indicates that red cells were also affected in production. Elevation of red cell volume occurs, amount other things, in low thyroid condition, liver disease, B-vitamin deficiencies and evolving leukemia condition in the bone marrow. (Tr. Vol. II, p. 40) According to Dr. Rajdev, one does not see this happening with an infection or inflammation.

Dr. Rajdev stated, "If I see a basophilia of four percent, and if it's a consistent finding, I would suspect that that is an active leukemia process, or it's an

evolving leukemia process," (Tr. Vol. II p. 40) He added that CGL takes years before it manifests itself physically to the person. Thus, when he diagnosed Claimant in January of 1989, the CGL would have started way before that point in time. (Tr. II p. 42) He explained, "It's not unheard of even to have what we call a myeloproliferative disorder where bone marrow is just producing a lot of cells for five to 10 years before it can manifest itself to the point that the patient presents for examination or in a hospital." (Tr. Vol. II p. 42) Dr. Rajdev summed up that he believed that by April of 1986, Claimant had a blood picture consistent with an evolving leukemia process. Dr. Rajdev did, however, note that Claimant's blood count did not necessarily rule out an infection on top of the underlying leukemia condition.

Using only the recorded occupational exposure as an "accurate" assessment of the only exposure claimant received while employed by Holmes & Narver Dr. Manly calculated Claimant's probability of causation that his CGL was the result of radiation exposure as between 0.3% and 6.7% at the 90% confidence interval. (CX 11, 13).

This estimate, it is noted, was made using the same excess relative cancer risk values contained in the BEIR V report, [6/] the

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[6/] A number of committees established by the National Academy of Sciences during the 1040's and 1950's dealt with the biological effects of-atomic radiation, at the time when there was considerable concern about the effects of fall-out radiation.

In the late 1960's, there was concern, in addition, about the biological effects of other ionizing radiations. Congress requested that the Federal Radiation Council (FRC) (the forerunner of the Environmental Protection Agency) establish an oversight committee to assess the biological effects of ionizing radiation.

The FRC requested the National Academy of Sciences and the National Research Council to convene a committee to summarize, evaluate and examine the scientific evidence as regards the biological effects of ionizing radiation particularly low level radiation, affecting human populations.

That first committee, convened in the late 1960's was known as the Advisory Committee in the Biological Effects of Ionizing Radiation, and therefore the acronym, BEIR. Because of subsequent committee meetings and reports over the past two Decades, the acronym had the Roman numeral "I" added to it, and that report, published in 1972 by the Advisory Committee of the National Academy of Sciences, National Research

same report used by Professor Marvin Goldman, 7/one of Employer's experts.

On the last page of his report, Dr. Goldman stated that there was a 99.5% chance that the CGL was caused by agents other then his 1.13 rem of radiation exposure. (CX 6) However, Dr. Goldman used a time of onset of greater than 30 years in his calculations and thus resulted in a lower probability of causation. As Dr. Manly pointed out, it is not useful to calculate the probability that Claimant might contract CGL as a result of his

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Council, was known as the BEIR-I report with the appropriate Roman numeral. (Tr. Vol. IV pp. 15-17)

The BEIR V probability of causation tables had their origin with the BEIR III report. These tables were based on epidemiological studies, primarily the BEIR III report. The Congressional mandate required that when new information becomes available the tables should be updated. That was in the charge in the BEIR-V committee, since the National Institutes of Health shared in the costs of carrying out the BEIR-V report.

7/ Dr. Goldman has a Ph. D. in radiation biology.

radiation exposure, as Dr. Goldman did; for Claimant, the probability of causation calculation performed by CGL was caused by radiation exposure as compared with other causes.

Dr. Fabrikant has stated that, in his opinion there is no sound basis for these tables of probability of causation that give them the concept or the reliability that they are either probabilities or can assign causation as a result of exposure to ionizing radiation. (Tr. Vol. VI p. 26) According to the doctor, thought they have come to be referred to as "the probability of causation tables, " they are not probabilities, but rather, they are ratios. "[T] hey do not assign causation to any environmental carcinogen or mutagen, whether it's radiation or anything else."
(Tr. Vol. VI p. 27)

A dose response curve is traditionally used for assessing the toxic effects of any chemical or radiation. The method for risk assessment is to plot on a graph the incidence of the condition that is being considered and the dose of the environmental carcinogen, mutagen, chemical or radiation, and relating those in a mathematical framework. (Tr. Vol. IV p.

136). The curves are used as a surrogate for the data that are absent, understanding that most biological systems have some kind of quantitative or measurable or mathematical basis. (Id.)

As Dr. Fabrikant stat4ed, "This does not mean that the curves are correct." It means that for purposes of analysis, one has to have more information and the information that is provided is the use of these curves. (Id.) Dr. Fabrikant concluded, "[T] he curves are constructed from limited facts. The reason we can extrapolate this curve all the way down to zero for leukemia in adults from the Japanese data is because it is a mathematical model, and there is a lack of data in the low dose domain." (Id.)

Dr. Fabrikant explained that these tables were developed as administrative method in order to achieve some approach to compensate certain individuals defined by the Orphan Drug Act. In order to be able to have some method to compensate for potential injury. (Tr. Vol. VI p. 23-27) These tables have never been used for this intended purpose.

Dr. Fabrikant noted that the oversight committee was chaired by a noted

statistician and stated, "As we deliberated responsibilities in the National Academy of Sciences dealing with a concept that had little or no foundation with regard to probability, or mathematical probabilities or causation. "(Tr. Vol. BI p. 30) "What we were dealing with that is used in public health - and I understand in some way might be used in law: that if we wanted to assign a proportion of responsibility to some agent to share in the overall injury that might have occurred, or the overall causation that might have occurred, one can assign that share based on a number of assumptions. The assumptions are derived from epidemiologist and from statistical analysis of epidemiological studies. : (Tr. Vol. VI p. 30)

According to Dr. Fabrikant, "Epidemiology deals with populations, not with individuals, so the assumptions always must be that the individual to whom you are addressing and assigning a share of injury due to some agent must be identical to the overall population and then assume the characteristics, epidemiological and otherwise, of that population. (Tr. Vol. VI p. 31)

Dr. Fabrikant opined that, "Since that cannot be done - in other words, one individual, whether it is you or myself, cannot be identical to all of the characteristics of a large population, then the initial assumption is erroneous." That is, assigning a share for one individual does not apply if that individual is supposed to have all of the characteristics of the population from which the data and the analyses are derived. (Tr. Vol. VI p. 31)

According to Dr. Fabrikant, once that assumption is accepted, then one can in fact assign share, but it is a ratio. It is not a probability. It in no way identities causation. It is always positive by virtue of the fact that one is assigned a positive number. There is no way of identifying the fact that that particular agent did in fact not cause any injury.

Dr. Fabrikant stated that if one uses "a probability of causation table on any given set of facts, regardless of how many or how few facts you have fitting that criteria you will always have a positive number." (Tr. Vol. VI p. 32).

Thus, the BEIR probability of causation tables was arrived at more by

consensus, than by the scientific theory of probability. They are authoritative, but not definitive. Therefore, the BEIR criteria in and of themselves cannot rebut the presumption that Claimant's CGL was caused by exposure to ionized radiation occurring between 1954 and 1956 while he worked for Employer.

It is also noted that Environmental conditions may affect film response in a variety of ways. (EX 62 p. 21) Numerous studies have documented the complex effects of temperature and humidity on personnel dosimetry films and have been summarized in the literature. (Id.) The numerous and varied effects noted also may be time dependent and reversal of the effect may occur with time. (Id.)

Latent image fading will result from high humidity but condensation of water on the film emulsion may cause fogging. (Id.) Heat-induced fogging may occur and is most pronounced in the relative humidity range 40-60 percent. Chemicals such as mercury or sulfur present in the atmosphere can act as either sensitizes or inhibitors of the photographic response. (Id.).

Since there is no indication that Claimant's recorded occupational exposure levels were adjusted for environmental conditions, these levels are suspect. Clearly, the recorded levels are not and accurate assessment of the exposure Claimant received while employed by Holmes & Narver.

Dr. Manly also did a recalculation of all possible sources of radiation exposure taking into account additional information obtained from the Defense Nuclear Agency reports and the depositions of Claimant and DeMercer. He determined that there were three time periods during which Claimant received most of his estimated radiation exposure. These time periods included:

1. The time for March, 1954, to December, 1954 during which he was exposed to fallout from the Bravo and Romeo tests on Bikini-Atoll.

2. The time from January, 1956, to June, 1956, during which he was exposed to residual contamination while on Fox Island and during which he was exposed to exposure form

fallout of the Cherokee test while on the transport ship to Enewetak.

3. One day in early June, 1956, during which he was exposed to external radiation exposure and internal contamination as a result of being placed on a contaminated island after the Seminole test.

These time periods will each be briefly and individually discussed?

As noted, Claimant's recorded occupational exposure for 1954 is 160 mrem. (0. 16 rem). However, he was not badged for the entire time he was on Parry Island. The film badge issue card for the film badge that contained his entire reported 1954 exposure showed that the badge was processed in May 1954. However, Dr. Manly pointed out, film badges generally cannot be used for more then about four weeks before processing, otherwise fading of the latent image occurs. According to a

Defense Nuclear Agency report [8/](EX 40 p. 38), badges worn in excess of four weeks were badly watermarked, showed evidence of severe light leaks, and were generally difficult to read (Id. Ex. 62 p. 149). Furthermore, "the exact spectrum of energy to which personnel are exposed when in a field of bomb debris is unknown; in fact, the spectrum probably varies considerably with time and place.;(EX 43)[9/] at most one month out of the nine months he was on Parry Island after the Bravo and Romeo tests.

From reviewing literature, actual recorded exposures for Enewetak Island (adjacent to Parry Island) were found. (CX 11 at 3) This was from badges with accumulated exposures in relation to the

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[8/] The report was extract of Headquarters Joint Task Force Seven Operation Order No. 1-53, prepared for the Defense Nuclear Agency. Operation Order No. 1-53 remains classified "Secret/Restricted Data."

[9/] Operations Castle - Radiological Safety (Pacific Proving Grounds March - May 1954) is an extract of WT-942 Operation Castle which remained classified - ""SECRET/RESTRICTED DATA as of the time of preparation of this report in 1954.

Bravo and Romeo tests. From these, estimates of exposure for Parry Island were made (CX 11 at p. 4) and the total estimated exposure was 1.45R, or 1.1 rem.

For the second time period, Claimant was issued film badges for the time from January 17, 1956 until June 9, 1956. These badges showed a total exposure of 0.94 R with an estimated dose equivalent of 0.7 rem. It should be noted that the water in Bikini Lagoon also became contaminated following several of the five detonations conducted there. As ships steamed or anchored in the contaminated water, radioactive materials began to systems within the ships. (EX 57 p. 27) Thus, while Claimant was on the USNS Fred C Ainsworth, he was exposed to some ionized radiation.

The third time period is for exposure in conjunction with an island on which Claimant was placed after going on a transport boat with scientists after the Seminole Test. Claimant did not know this island but gave a detailed description. (CX 11 at p. 5)

Using Claimant's description, plus the fact that Claimant was familiar with

several islands from his shell hunting trips, and the fact that certain islands were not part of the exclusion area established for the Seminole test, Dr. Manly found that Clara (Kirunu) Island fit all the features described by Claimant. (CX 11 at 6) Dr. Manly did note that he did give some consideration to the fact the clothing worn by the scientist may not have been for contamination control, and thus the trip might not have been to survey radiation levels in conjunction with Clara Island. However, he ruled out this possibility because too many items fit the description of the standard radex (radiation exposure) team to be considered coincidental. Therefore, it was reasonably assumed that the island Claimant was placed on was Clara.

Ground level radiation levels were available for islands on either side of Clara, as well as for areas near ground zero. A plot of radiation levels as a function of distance was made and a regression analysis performed. As a conservative approach, Claimant was assumed to be on Clara at D+1 (one day after explosion) and those radiation levels were used in calculation his estimated exposure. It was assumed that Claimant spent 3 to 4 hours on Clara. After doing the calculations Dr. Manly found that

Claimant's dose exposure was 4.5 rem. (CX 13)

Dr. Manly estimated Claimant's radiation dose to be 6.3 rem (1.1 calculated external dose for Bravo and Romeo tests + .07 recorded external dose for third contract period + 4.5 calculated external dose for Seminole test). The "upper bound" estimate was 15.6 rem. (CX 13) this upper bound was provided because there is generally a great deal of uncertainty in estimating radiation exposure. (CX 11 at p. 3) Dr. Manly explained this upper bound estimate is noted in keeping with the standard procedure used by the Department of Veterans Affairs in calculation exposure estimates for servicemen. That policy is to presume, when a range of dose is reported, that exposure was at the highest level of the dose range. (CX 11 at p. 3)

After arriving at the estimated dose exposure, Dr. Manly calculated the probability of causation for leukemia using methods contained in the National Research Council report, Health Effects of Exposure to Low Levels of Ionizing Radiation (BEIR V). The BEIR V study is based on measurement of Leukemia rates of the Atomic Bomb survivors. This population

was generally exposed to higher levels of radiation over a short period of time. Estimates of leukemia rates for lower, chronic exposure to ionizing radiation were made by fitting a response curve between zero exposure, where no effect is seen, and the highest exposures received by the survivors. The excessive relative risk used is specific for age of exposure and latency before onset of the disease. (CX 11 at p. 9)

The percent probability of causation for leukemia at the 90a% confidence level in accordance with the BEIR V study was 1.9 to 28 percent for a radiation dose of 7.8 rem and 4.5 to 50 percent for a radiation dose of 15.6 rem.

Another study, the National Registry for Radiation Workers (NRRW) was based on measurement of leukemia rates of occupational workers in Britain who were exposed to chronic low-level amounts of ionizing radiation. The population size for the NRRW study is larger than the Atomic Bomb survivors, but the study has been in progress for a shorter tine. The NRRW study reports only an overall excessive relative risk for leukemia, and does not show excessive relative risk by age of exposure or latency of onset of

disease. The percent probability of causation for CGL at the 90 percent confidence level in accordance with the NRRW study is 2.5 to 46 percent for a radiation dose of 6.3 rm and 4.5 to 50 percent for a radiation dose of 15.6 rem. (CX 13)

There is also evidence that indicated that there was probable exposure to ionizing radiation during the course of Claimant's shell hunting trips form swimming and diving. The evidence indicates that the people who went on these shell-hunting excursions (sponsored by Employer) did not take along their badges. (Tr. Vol. I p. 41). De Mercer, who operated the company boat during these trips indicated that the participants on these shell hunting excursions not only swan in the waters on the lagoon-side of the island and got shells, but they also went to the island themselves during these shell hints. (CX 12 at pp. 31-32; Tr. Vol. III p. 309)

Dr. Auxier had indicated under cross-examination that if the shell hunters had gone on these islands, if there was radioactive or ionizing radiation contamination, they would have been exposed to that. (Tr. Vol. III p, 309) Dr.

Auxier did indicate that the water would have provided a shield to divers. (Tr. Vol. III p. 303) However, Dr. Manly stated that he knew form the DNA reports that the fallout falling into the water takes a while before it settles to the bottom or gets flushed out of the lagoon. (Tr. Vol. II at p. 331) Dr. Manly opined that soon after some of the tests, the surveyors would actually find fairly high radiation levels in the water or on top of the water from fall-out that had not yet gone down into the sediment where it might yet be washed out. (Tr. Vol. III p. 331) Additionally it was noted that the shells themselves, and fish would have been subjected to radioactive contamination from the island runoff. (Tr. Vol. II at p. 331) Since Claimant indicated that he did not eat any fish, any internal exposure would have come from swallowing water while swimming and diving.

Additionally, when Claimant was picked-up by the helicopter while on Clara Island, a great deal of dust was stirred up by the helicopter blades and thus, Claimant could have internal exposure as a result of the inhalation of dust. (Tr. Vol. I, p. 56) it is noted that Claimant's documented external exposure specifically states that any internal exposure was not recovered. (CX 15 p. 1)

Even if Claimant was not exposed to more than two to three rem, as Dr. Auxier testified, Employer's argument remains faulty. The NRRW study, it is noted, dealt with the effects of ionizing radiation at low levels over extended periods of time, similar to the instant case. (CX 11, Attachment R) the NRRW findings show an increase in CGL at lower levels of approximately three rem. (CX 11, Attachment R., p. 2) Looking at the total rem dose in Table II of that study, one sees the figure 33.6 milli which converts to 3. 36 rem. (Tr. Vol. I, p. 167) this would place Claimant's actually recorded exposure in line with the amount found to show an increased risk by the NRRW study.

At this point it should be noted also, that the amount of recorded radiation Claimant was exposed to in 1956 (940 millirem) exceeds the present law's limit of 500 millirem per year. (CX 5)

Employer also argues that Claimant's probability of causation calculation is erroneous since it is based upon the assumption that Claimant's CGL manifested in 1986. Dr. Fabrikant's interpretation of Claimant's 1986 complete

blood count (CBC) attributes the workup results, not to a manifestation of CGL, but to Claimant having a knee inflammation and infection from scabies. (Tr. Vol. IV p. 109) (Had Claimant's CGL manifested in 1989, the excess relative risk based on the longer latency period would have greatly reduced the probability of causation calculation.)

However, the record shows that it was on October 19, 1981 that Claimant had scabies. (CX 8 p. 13) Also, as previously noted, Claimant's four percent basophiles and MCV of 103 indicated and evolving CGL process. (Tr. Vol. II pp. 39-40) Dr. Rajdev's testimony concerning these two facts was uncontradicted by Dr. Fabrikant's testimony. (Tr. Vl. IV pp. 107-111) 8/

Similarly, Employer also argues that Claimant's age should throw him into a different probability of causation statistical category. Dr. Rajdev acknowledged that with CGL, the age of exposure (the age when the patient is exposed) seems to make some difference in terms of the risk of radiation exposure (Tr. Vol. III at p. 73) Claimant was about 29 when he was exposed to the ionized radiation in 1956. According to the Journal of Radiation

Resea5rch, (Tr. Vol. II p. 73), when people 15 to 29 are exposed to radiation, the period for which they are most liable to get leukemia peaks at eight years past exposure.

However, it must be kept in mind that Claimant was actually between 29 and 30. Making a statistical/ mathematical determination form a probability standpoint such as Employer has, when Claimant's age is really on the boarder between two-age grouping is unrealistic. As Dr. Rajdev explained, he felt that this study reflected the particular numbers it started out with. According to the doctor, there should be a never-ending association with some patients who contact leukemia. IN this particular age group (15 to 29) the actual study observed no leukemia victims after the noted period. Only the third group in the Journal report, the older age category of 30 and above, reflected the incidence of leukemia did not statistically drop to zero after a certain period of years.

Dr. Rajdev explained that it was his feeling that while a clear division in probability between the ages of 29 and 30 might make sense statistically, it does not medically. (Tr. Vol. II at pp. 78-79)

Interpreting the graph form a medial point of view, he explained:

> Again, these studies-when You interpret literature, you have to take it in the context of what it means.
>
> All it means – what they are trying to tell me at least, the way I interpret this, is that the younger you are, the earlier you will get leukemia. That's all. The older you are, the later you may get leukemia. (Tr. Vol. II at p. 80)
>
> The trend is that the older you were, the more likely you were to get leukemia later in life than if you were younger. (Tr. Vol. II at p. 80)

Dr. Rajdev stated that he failed to see that if one is 29 years old, one cannot likely contact leukemia form radiation, beyond a certain point, but if one was 30 years old, one could get leukemia for a

significantly long period, i.e. 30 years. (Tr. Vol. II at p. 81)

It should be noted that, according to Dr. Manly, the NRRW study assumes up to a 40-year latency in terms of calculating the probability of causation to leukemia.

Employer has also argued that Claimant could not have been on Clara Island when he was put ashore and picked up by the helicopter however, professor Manly has more than adequately explained how he reached the conclusion that Claimant was put ashore on this island. (Tr. Vol. II p. 266) In any event, the recorded level of radiation to which Claimant was exposed is sufficient to have caused his CGL.

Therefore, taking the rebuttal evidence into account, it is found that Employer has not rebutted the Section 20 (a) presumption. Claimant remains entitled to the presumption that his CGL was caused by his ionized radiation exposure, which occurred while he was working for Employer.

Next, it must be determined whether Claimant is entitled to penalties

under Section 14 (e) of the Act. As previously noted, timely notice was given on August 1, 1989; Claimant filed his claim on July 19, 1989; and Employer filed a first report of accident and its notice of controversion on December 8, 1989.

When compensation payable without an award is not paid within 14 days after it becomes due, as provided in the Act, a claimant shall be entitled to these payments together with an additional amount equal to 10 percent of the unpaid installments for those installments that were due prior to a controversion, an informal conference, or unless excused by the District Director. Section 14 (e).

Taking into account, it is found that Employer owes Section 14 (e) penalties for the period of January 17, 1989 to December 8, 1989.1

Claimant is entitled to interest on any accrued unpaid compensation benefits. Watkins V. Newport News Shipbuilding & Dry Dock Company, 8 BRBS 556, 559 (1978), aff'd in part, rev'd in part sub. Nom., Newport News Shipbuilding & Dry Dock Company v. Director, OWCP, 594 F. 2d 986. Interest is mandatory and cannot be waived

in contested cases. Byrum v. Newport News Shipbuilding and Dry Dock Co., 14 BRBS 833 (1982): Mac Donald v. Sun Shipbuilding & Dry Dock Co., 10 BRBS 734 (1978). However, interest may be waived by the parties as an item of compromise in a settlement agreement under Section 8 (i) of the Act.

Section 28 of the Act and implementing Code of Federal Regulations Section 702.132 provide for approval of attorney fees. Claimant's counsel is hereby directed to file an attorney fee petition with 30days of receipt of this Decision and Order while at the same time serving a copy on Respondent's counsel who shall then have 30 days from receipt in which to respond to the fee application.

## Order

It is hereby ORDERED that:

1. Employer/Carrier shall pay to Claimant temporary total disability for the period beginning January 17, 1989 and continuing thereafter in accordance with Section 8(c) of the Act. Such compensation is to be based on an average weekly wage determined under Section 10(d) (2) (B).

Under Section 10 (i) the time of injury shall be January 17, 1989.

2. Employer/Carrier shall pay to Claimant interest on any accrued unpaid compensation benefits. The rate of interest shall be calculated at a rate equal to the coupon issue yield equivalent (as determined by the Secretary of Treasury) of the average auction price for the last auction of 52 week United States Treasury bills a of the date this Decision and Order is filed with the District Director;

3. Employer/Carrier shall be entitled to credit for any payments of compensation previously made to Claimant;

4. Employer/Carrier shall pay Section 14 (e) penalties to Claimant for the period of January 17, 1989 to December 8, 1989;

5. Employer/Carrier shall pay for or reimburse Claimant for the costs of such necessary medical care and treatment (both physical and psychological in nature) related to Claimant's work-related exposure to ionized radiation.

6. Claimant's counsel shall have 30 days from receipt of this Order in which to file an

attorney fee petition and simultaneously serve a copy of the petition on opposing counsel. Thereafter, Respondents shall have 30 days from receipt of the fee petition in which to respond to the petition.

s/_____
G. MARVIN BOBER
Administrative Law Judge

Dated: March 11, 1993
Washington, D.C.
GMB/KJA/kat